

PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Unifrax Corporation, New Carlisle Facility
54401 Smilax Road
New Carlisle, Indiana 46552**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T 141-7925-00029	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date:

TABLE OF CONTENTS

A	SOURCE SUMMARY	5
A.1	General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]	
A.2	Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]	
A.3	Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]	
A.4	Part 70 Permit Applicability [326 IAC 2-7-2]	
B	GENERAL CONDITIONS	11
B.1	Definitions [326 IAC 2-7-1]	
B.2	Permit Term [326 IAC 2-7-5(2)]	
B.3	Enforceability [326 IAC 2-7-7]	
B.4	Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]	
B.5	Severability [326 IAC 2-7-5(5)]	
B.6	Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]	
B.7	Duty to Supplement and Provide Information [326 IAC 2-7-4(b)] [326 IAC 2-7-5(6)(E)] [326 IAC 2-7-6(6)]	
B.8	Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]	
B.9	Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]	
B.10	Annual Compliance Certification [326 IAC 2-7-6(5)]	
B.11	Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1)and(6)] [326 IAC 1-6-3]	
B.12	Emergency Provisions [326 IAC 2-7-16]	
B.13	Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]	
B.14	Multiple Exceedances [326 IAC 2-7-5(1)(E)]	
B.15	Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]	
B.16	Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]	
B.17	Permit Renewal [326 IAC 2-7-4]	
B.18	Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]	
B.19	Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]	
B.20	Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]	
B.21	Source Modification Requirement [326 IAC 2-7-10.5]	
B.22	Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2]	
B.23	Transfer of Ownership or Operational Control [326 IAC 2-7-11]	
B.24	Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)]	
C	SOURCE OPERATION CONDITIONS	22
	Emission Limitations and Standards [326 IAC 2-7-5(1)]	
C.1	Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds Per Hour [326 IAC 6-3-2(c)]	
C.2	Opacity [326 IAC 5-1]	
C.3	Open Burning [326 IAC 4-1] [IC 13-17-9]	
C.4	Incineration [326 IAC 4-2] [326 IAC 9-1-2]	
C.5	Fugitive Dust Emissions [326 IAC 6-4]	
C.6	Operation of Equipment [326 IAC 2-7-6(6)]	
C.7	Stack Height [326 IAC 1-7]	
C.8	Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61.140]	

Testing Requirements [326 IAC 2-7-6(1)]

C.9 Performance Testing [326 IAC 3-6]

Compliance Requirements [326 IAC 2-1.1-11]

C.10 Compliance Requirements [326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

C.12 Maintenance of Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

C.13 Monitoring Methods [326 IAC 3]

C.14 Pressure Gauge Specifications

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

C.16 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.215]

C.17 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5]
[326 IAC 2-7-6]

C.18 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.19 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)]

C.20 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

C.21 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

Stratospheric Ozone Protection

C.22 Compliance with 40 CFR 82 and 326 IAC 22-1

D.1 FACILITY OPERATION CONDITIONS: High-heat insulating materials manufacturing 31

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter (PM) [326 IAC 2-2] [326 IAC 2-3] [326 IAC 6-1]

D.1.2 Non-applicable Requirements [326 IAC 2-3] [326 IAC 6-3-2]

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements

D.1.4 Particulate Matter (PM)

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.5 Monitoring

D.1.6 Visible Emissions Notations

D.1.7 Parametric Monitoring

D.1.8 Baghouse Inspections

D.1.9 Broken or Failed Bag Detection

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.10 Record Keeping Requirements

D.1.11 Reporting Requirements

D.2 FACILITY OPERATION CONDITIONS: Insignificant Activities 44

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Matter (PM) [326 IAC 6-1]

Certification	45
Emergency Occurrence Report	46
Quarterly Deviation and Compliance Monitoring Report	48
Quarterly Report Forms (3)	50

SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary high-heat insulating materials manufacturing source.

Responsible Official:	Casey Sobchak
Source Address:	54401 Smilax Road, New Carlisle, Indiana 46552
Mailing Address:	54401 Smilax Road, New Carlisle, Indiana 46552
Phone Number:	219-654-7133
SIC Code:	3299
County Location:	St. Joseph
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(a) One (1) Raw Material Handling System consisting of:

- (1) One (1) No. 4 Sand Silo, equipped with a baghouse identified as No. 4 Sand Silo Baghouse, constructed in 1978, capacity: 0.89 tons per hour.
- (2) One (1) No. 3 Alumina Silo, equipped with a baghouse identified as No. 3 Alumina Silo Baghouse, constructed in 1978, capacity: 0.89 tons per hour.
- (3) One (1) No. 1 Kaolin Silo, equipped with a baghouse identified as No. 1 Kaolin Silo Baghouse, constructed in 1978, capacity: 0.89 tons per hour.
- (4) One (1) No. 2 Kaolin Silo, equipped with a baghouse identified as No. 2 Kaolin Silo Baghouse, constructed in 1978, capacity: 0.89 tons per hour.
- (5) One (1) No. 5 Zircon Silo, equipped with a baghouse identified as No. 5 Zircon Silo Baghouse, constructed in 1985, capacity: 0.89 tons per hour.
- (6) One (1) No. 6 H.G. Alumina Silo, equipped with a baghouse identified as No. 6 H.G. Alumina Silo Baghouse, constructed in 1986, capacity: 0.89 tons per hour.
- (7) One (1) Alumina Transporter, equipped with a baghouse identified as Alumina Transporter Venting Baghouse, constructed in 1978, capacity: 0.89 tons per hour.

- (8) One (1) No. 1 Day Bin Kaolin, equipped with a baghouse identified as No. 1 Day Bin Kaolin Bin Venting Baghouse, constructed in 1988, capacity: 0.89 tons per hour.
- (9) One (1) No. 2 Day Bin Alumina, equipped with a baghouse identified as No. 2 Day Bin Alumina Bin Venting Baghouse, constructed in 1988, capacity: 0.89 tons per hour.
- (10) One (1) No. 3 Day Bin Sand, equipped with a baghouse identified as No. 3 Day Bin Sand Bin Venting Baghouse, constructed in 1988, capacity: 0.89 tons per hour.
- (b) One (1) Tilt Furnace Process consisting of:
 - (1) One (1) Tilt Furnace Mix Feed Bin 1, equipped with a baghouse identified as Tilt Furnace Mix Feed Bins 1 & 2 Baghouse, constructed in 1985, capacity: 0.925 tons per hour.
 - (2) One (1) Tilt Furnace Mix Feed Bin 2, equipped with a baghouse identified as Tilt Furnace Mix Feed Bins 1 & 2 Baghouse, constructed in 1985, capacity: 0.925 tons per hour.
 - (3) One (1) Tilt Furnace Mix Feed Bin 3, equipped with a baghouse identified as Tilt Furnace Mix Feed Bin 3 Baghouse, constructed in 1985, capacity: 0.925 tons per hour.
 - (4) One (1) Tilt Furnace, equipped with a baghouse identified as Tilt Fume Collector Baghouse, constructed in 1986, capacity: 0.925 tons per hour.
 - (5) One (1) Tilt Furnace Cyclone, equipped with a baghouse identified as Tilt Furnace HSA Baghouse, constructed in 1985, capacity: 0.925 tons per hour.
 - (6) One (1) Tilt Furnace Bulk Bagger, equipped with a baghouse identified as Tilt Furnace HSA Baghouse, constructed in 1985, capacity: 0.925 tons per hour.
 - (7) One (1) Tilt Furnace Attrition Mill, equipped with a baghouse identified as Tilt Furnace HSA Baghouse, constructed in 1985, capacity: 0.925 tons per hour.
- (c) One (1) Submerged Electric Furnace I (SEF I) Process consisting of:
 - (1) One (1) SEF I Mix Feed Bin, equipped with a baghouse identified as SEF I Mix Feed Bin Venting Baghouse, constructed in 1988, capacity: 0.675 tons per hour.
 - (2) One (1) SEF I Furnace, equipped with a baghouse identified as SEF I Furnace Baghouse, constructed in 1986, capacity: 0.675 tons per hour.
 - (3) One (1) SEF I Collector, equipped with a baghouse identified as SEF I Collector Baghouse, constructed in 1991, capacity: 0.675 tons per hour.
 - (4) One (1) SEF I Bulk Bagger, equipped with a baghouse identified as SEF I Downline Baghouse, constructed in 1985, capacity: 0.675 tons per hour.
- (d) One (1) Submerged Electric Furnace II (SEF II) Process consisting of:
 - (1) One (1) SEF II Mix Feed Bin 1, equipped with a baghouse identified as SEF II Mix

- Feed Bin 1 Bin Venting Baghouse, constructed in 1988, capacity: 1.4 tons per hour.
- (2) One (1) SEF II Mix Feed Bin 2, equipped with a baghouse identified as SEF II Mix Feed Bin 2 Bin Venting Baghouse, constructed in 1988, capacity: 1.4 tons per hour.
 - (3) One (1) SEF II Furnace, equipped with a baghouse identified as SEF II Furnace Baghouse, constructed in 1988, capacity: 1.4 tons per hour.
 - (4) One (1) SEF II Packaging Equipment, equipped with a baghouse identified as SEF II Downline Baghouse, constructed between 1988 and 1990, capacity: 1.4 tons per hour.
 - (5) One (1) SEF II Cyclone, equipped with a baghouse identified as SEF II Cyclone Baghouse, constructed in 1996, capacity: 1.4 tons per hour.
 - (6) One (1) SEF II Collector, equipped with a baghouse identified as SEF II Collector Baghouse, constructed in 1996, capacity: 1.4 tons per hour.
- (e) One (1) Submerged Electric Furnace III (SEF III) Process consisting of:
- (1) One (1) SEF III Mix Feed Bin 1, equipped with a baghouse identified as SEF III Mix Feed Bin 1 Bin Venting Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (2) One (1) SEF III Mix Feed Bin 2, equipped with a baghouse identified as SEF III Mix Feed Bin 2 Bin Venting Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (3) One (1) SEF III Slag Reclaim Bin, equipped with a baghouse identified as SEF III Slag Reclaim Bin Venting Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (4) One (1) SEF III Furnace, equipped with a baghouse identified as SEF III Furnace Baghouse, constructed in 1986, capacity: 1.4 tons per hour.
 - (5) One (1) SEF III Collector, equipped with a baghouse identified as SEF III Collector Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (6) One (1) SEF III Needler, equipped with a baghouse identified as SEF III Downline Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (7) One (1) SEF III Wet Slitter, equipped with a baghouse identified as SEF III Downline Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (8) One (1) SEF III Roll-up Machine, equipped with a baghouse identified as SEF III Downline Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (9) One (1) SEF III Guillotine, equipped with a baghouse identified as SEF III Downline Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (10) One (1) SEF III Attrition Mill, equipped with a baghouse identified as SEF III Downline Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
- (f) One (1) Submerged Electric Furnace IV (SEF IV) Process consisting of:

- (1) One (1) SEF IV Mix Feed Bin 1, equipped with a baghouse identified as SEF IV Mix Feed Bin 1 Bin Venting Baghouse, constructed in 1997, capacity: 0.95 tons per hour.
- (2) One (1) SEF IV Mix Feed Bin 2, equipped with a baghouse identified as SEF IV Mix Feed Bin 2 Bin Venting Baghouse, constructed in 1997, capacity: 0.95 tons per hour.
- (3) One (1) SEF IV Furnace, equipped with a baghouse identified as SEF IV Furnace Baghouse, constructed in 1997, capacity: 0.95 tons per hour.
- (4) One (1) SEF IV Attrition Mill, equipped with a baghouse identified as SEF IV Downline Baghouse, constructed in 1997, capacity: 0.95 tons per hour.
- (5) One (1) SEF IV Cyclone & Bulk Bagger, equipped with a baghouse identified as SEF IV Downline Baghouse, constructed in 1997, capacity: 0.95 tons per hour.
- (g) One (1) Vacuum Casting Process consisting of:
 - (1) One (1) Vacuum Cast Mix Tank 1, equipped with a baghouse identified as Vacuum Cast Mix Tanks Baghouse, constructed in 1982, capacity: 1 ton per hour.
 - (2) One (1) Vacuum Cast Mix Tank 2, equipped with a baghouse identified as Vacuum Cast Mix Tanks Baghouse, constructed in 1982, capacity: 1 ton per hour.
 - (3) One (1) Vacuum Cast Board Sander, equipped with a baghouse identified as Vacuum Cast Board Sander Baghouse, constructed in 1978, capacity: 1 ton per hour.
 - (4) One (1) Vacuum Cast Board Saw System, equipped with a baghouse identified as Vacuum Cast Board Saw System Baghouse, constructed in 1996, capacity: 1 ton per hour.
- (h) One (1) Fabricated Products Area consisting of:
 - (1) One (1) Fabricated Products Area consisting of folding, banding, and module-making machines, equipped with a baghouse identified as Fabricated Products Area Equipment Baghouse 1, constructed in 1981, capacity: 2 tons per hour.
 - (2) One (1) Fabricated Products Area consisting of a v-blender, ball mill, and high-temperature caulk fabrication, equipped with a baghouse identified as Fabricated Products Area Equipment Baghouse 2, constructed in 1981, capacity: 2 tons per hour.
 - (3) One (1) Fabrication Area Vacuum System, equipped with a baghouse identified as Fabrication Area Vacuum System Baghouse, constructed in 1981, capacity: 1 ton per hour.
- (i) One (1) Warehouse Blow-off Booth with particulate emissions controlled by a Warehouse Blow-off Booth filter, constructed in 1981, capacity: 1 ton per hour.
- (j) One (1) ODB Bagger, equipped with a baghouse identified as ODB Baghouse, constructed in 1981, capacity: 0.25 tons per hour.
- (k) The following facilities at the Raw Material Handling System:

- (1) One (1) Common Blender Transporter, constructed in 1990, equipped with a baghouse identified as Common Blender Transporter Venting Baghouse, capacity: 0.89 tons per hour.
 - (2) One (1) No. 4 Day Bin H.G. Alumina, constructed in 1990, equipped with a baghouse identified as No. 4 Day Bin H.G. Alumina Bin Venting Baghouse, capacity: 0.89 tons per hour.
 - (3) One (1) No. 5 Day Bin Zircon, constructed in 1990, equipped with a baghouse identified as No. 5 Day Bin Zircon Bin Venting Baghouse, capacity: 0.89 tons per hour.
 - (4) One (1) No. 6 Day Bin Test Material, constructed in 1990, equipped with a baghouse identified as No. 6 Day Bin Test Material Bin Venting Baghouse, capacity: 0.89 tons per hour.
 - (5) One (1) Bad Batch Bin, constructed in 1990, equipped with a baghouse identified as Bad Batch Bin Bin Venting Baghouse, capacity: 0.89 tons per hour.
 - (6) One (1) SEF I, SEF IV, Tilt Blender Transporter, constructed in 1997, equipped with a baghouse identified as SEF I, SEF IV, Tilt Blender Transporter Baghouse, capacity: 0.89 tons per hour.
 - (7) One (1) SEF II, SEF III Blender Transporter, constructed in 1997, equipped with a baghouse identified as SEF II, SEF III Blender Transporter Baghouse, capacity: 0.89 tons per hour.
- (l) The following facility at the Tilt Furnace Process:
- One (1) Tilt Furnace Conveyor, constructed in 1994, equipped with a baghouse identified as Tilt Furnace HSA Baghouse, capacity: 0.925 tons per hour.
- (m) The following facilities at the Submerged Electric Furnace I (SEF I) Process:
- (1) One (1) SEF I Conveyor System, constructed in 1988, equipped with a baghouse identified as SEF I Downline Baghouse, capacity: 0.675 tons per hour.
 - (2) One (1) SEF I Attrition Mill, constructed in 1988, equipped with a baghouse identified as SEF I Downline Baghouse, capacity: 0.675 tons per hour.
 - (3) One (1) SEF I Picker, constructed in 1988, equipped with a baghouse identified as SEF I Downline Baghouse, capacity: 0.675 tons per hour.
- (n) The following facility at the Submerged Electric Furnace II (SEF II) Process:
- One (1) SEF II Attrition Mill, constructed in 1997, equipped with a baghouse identified as SEF II Downline Baghouse, capacity: 1.4 tons per hour.
- (o) The following facilities at the Submerged Electric Furnace III (SEF III) Process:
- (1) One (1) SEF III Conveyor System, constructed in 1985, equipped with a baghouse identified as SEF III Downline Baghouse, capacity: 1.4 tons per hour.

- (2) One (1) SEF III Bulk Bagger, constructed in 1985, equipped with a baghouse identified as SEF III Downline Baghouse, capacity: 1.4 tons per hour.

(p) The following facilities at the Fabricated Products Area:

- (1) One (1) Fabricated Products Area Band Saw System, constructed in 1981, equipped with a baghouse identified as Fabricated Products Area Band Saw System Baghouse, capacity: 1 ton per hour.
- (2) One (1) Fabrication Area Blow-off booth, constructed in 1986, equipped with a filter identified as Fabrication area Blow-off Booth Filter, capacity: 1 ton per hour.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]
[326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:

One (1) Tilt Furnace Boiler, capacity: 7 million British thermal units per hour.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)]

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

B.3 Enforceability [326 IAC 2-7-7]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.4 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Supplement and Provide Information [326 IAC 2-7-4(b)] [326 IAC 2-7-5(6)(E)] [326 IAC 2-7-6(6)]

- (a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality. [326 IAC 2-7-5(6)(E)]
- (c) The Permittee may include a claim of confidentiality in accordance with 326 IAC 17. When

furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit constitutes a violation of the Clean Air Act and is grounds for:
 - (1) Enforcement action;
 - (2) Permit termination, revocation and reissuance, or modification; or
 - (3) Denial of a permit renewal application.
- (b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (c) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in condition B, Emergency Provisions.

B.9 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

B.10 Annual Compliance Certification [326 IAC 2-7-6(5)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than April 15 of each year to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

B.11 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]
[326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP and the PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

B.12 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-7-16.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
 - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, and the Northern Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

Northern Regional Office
Telephone Number: 219-245-4870
Facsimile Number: 219-245-4877
 - (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value.

Any operation shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.13 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

- (b) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits. All previously issued operating permits are superseded by this permit.
- (c) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.
- (d) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (e) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
- (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
 - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
 - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
 - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (f) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections

502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

- (g) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (h) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(7)]

B.14 Multiple Exceedances [326 IAC 2-7-5(1)(E)]

Any exceedance of a permit limitation or condition contained in this permit, which occurs contemporaneously with an exceedance of an associated surrogate or operating parameter established to detect or assure compliance with that limit or condition, both arising out of the same act or occurrence, shall constitute a single potential violation of this permit.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report.

The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
 - (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
 - (2) Failure to implement elements of the Preventive Maintenance Plan unless such failure has caused or contributed to a deviation.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompli-

ance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.17 Permit Renewal [326 IAC 2-7-4]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]
 - (1) A timely renewal application is one that is:
 - (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

- (2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.
- (c) Right to Operate After Application for Renewal [326 IAC 2-7-3]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.
- (d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]
If IDEM, OAQ, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]

- (a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1)(D)(i) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC

2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20 (b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b), (c)(1), and (e)(2).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) Emission Trades [326 IAC 2-7-20(c)]

The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

B.21 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by 326 IAC 2 and 326 IAC 2-7-10.5.

B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy any records that must be kept under the conditions of this permit;
- (c) Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-

11(c)(3)]

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds Per Hour [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61.140]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Indiana Accredited Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.9 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ, within forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.10 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

All monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.12 Maintenance of Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

- (a) In the event that a breakdown of the emission monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.
- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.13 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.14 Pressure Gauge Specifications

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall be a magnehelic gauge and will have a scale that reads not less than 0.2 pounds water pressure per marking, or have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within ninety (90) days after the date of issuance of this permit.

The ERP does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.16 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

- (a) A compliance schedule for meeting the requirements of 40 CFR 68 by the date provided in 40 CFR 68.10(a); or
- (b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and
- (c) A verification to IDEM, OAQ, that a RMP or a revised plan was prepared and submitted as required by 40 CFR 68.

All documents submitted pursuant to this condition shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.17 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. The compliance monitoring plan can be either an entirely new document, consist in whole information contained in other documents, or consist of a combination of new information and information contained in other documents. If the compliance monitoring plan incorporates by reference information contained in other documents, the Permittee shall identify as part of the compliance monitoring plan the documents in which the information is found. The elements of the compliance monitoring plan are:
 - (1) This condition;
 - (2) The Compliance Determination Requirements in Section D of this permit;
 - (3) The Compliance Monitoring Requirements in Section D of this permit;
 - (4) The Record Keeping and Reporting Requirements in Section C (General Record Keeping Requirements and General Reporting Requirements) and in Section D of this permit; and
 - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is

comprised of:

- (A) Reasonable response steps that may be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
 - (B) A time schedule for taking reasonable response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to take reasonable response steps shall constitute a violation of the permit.
- (c) Upon investigation of a compliance monitoring excursion, the Permittee is excused from taking further response steps for any of the following reasons:
 - (1) A false reading occurs due to the malfunction of the monitoring equipment. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
 - (3) An automatic measurement was taken when the process was not operating; or
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (e) All monitoring required in Section D shall be performed at all times the equipment is operating. If monitoring is required by Section D and the equipment is not operating, then the Permittee may record the fact that the equipment is not operating or perform the required monitoring.
- (f) If for reasons beyond its control, the Permittee fails to perform the monitoring and record keeping as required by Section D, then the reasons for this must be recorded.
 - (1) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent of the operating time in any quarter.
 - (2) Temporary, unscheduled unavailability of qualified staff shall be considered a valid reason for failure to perform the monitoring or record keeping requirements in Section D.

-
- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the corrective actions are being implemented.
 - (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
 - (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.19 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
 - (1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
 - (2) Indicate actual emissions of other regulated pollutants (as defined by 326 IAC 2-7-1) from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

C.20 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years.

The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

- (b) Records of required monitoring information shall include, where applicable:
 - (1) The date, place, and time of sampling or measurements;
 - (2) The dates analyses were performed;
 - (3) The company or entity performing the analyses;
 - (4) The analytic techniques or methods used;
 - (5) The results of such analyses; and
 - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
 - (1) Copies of all reports required by this permit;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;
 - (4) Records of preventive maintenance.
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.21 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

- (d) Unless otherwise specified in this permit, any quarterly or semi-annual report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The reports do require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

Stratospheric Ozone Protection

C.22 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

- (a) One (1) Raw Material Handling System consisting of:
- (1) One (1) No. 4 Sand Silo, equipped with a baghouse identified as No. 4 Sand Silo Baghouse, constructed in 1978, capacity: 0.89 tons per hour.
 - (2) One (1) No. 3 Alumina Silo, equipped with a baghouse identified as No. 3 Alumina Silo Baghouse, constructed in 1978, capacity: 0.89 tons per hour.
 - (3) One (1) No. 1 Kaolin Silo, equipped with a baghouse identified as No. 1 Kaolin Silo Baghouse, constructed in 1978, capacity: 0.89 tons per hour.
 - (4) One (1) No. 2 Kaolin Silo, equipped with a baghouse identified as No. 2 Kaolin Silo Baghouse, constructed in 1978, capacity: 0.89 tons per hour.
 - (5) One (1) No. 5 Zircon Silo, equipped with a baghouse identified as No. 5 Zircon Silo Baghouse, constructed in 1985, capacity: 0.89 tons per hour.
 - (6) One (1) No. 6 H.G. Alumina Silo, equipped with a baghouse identified as No. 6 H.G. Alumina Silo Baghouse, constructed in 1986, capacity: 0.89 tons per hour.
 - (7) One (1) Alumina Transporter, equipped with a baghouse identified as Alumina Transporter Venting Baghouse, constructed in 1978, capacity: 0.89 tons per hour.
 - (8) One (1) No. 1 Day Bin Kaolin, equipped with a baghouse identified as No. 1 Day Bin Kaolin Bin Venting Baghouse, constructed in 1988, capacity: 0.89 tons per hour.
 - (9) One (1) No. 2 Day Bin Alumina, equipped with a baghouse identified as No. 2 Day Bin Alumina Bin Venting Baghouse, constructed in 1988, capacity: 0.89 tons per hour.
 - (10) One (1) No. 3 Day Bin Sand, equipped with a baghouse identified as No. 3 Day Bin Sand Bin Venting Baghouse, constructed in 1988, capacity: 0.89 tons per hour.
- (b) One (1) Tilt Furnace Process consisting of:
- (1) One (1) Tilt Furnace Mix Feed Bin 1, equipped with a baghouse identified as Tilt Furnace Mix Feed Bins 1 & 2 Baghouse, constructed in 1985, capacity: 0.925 tons per hour.
 - (2) One (1) Tilt Furnace Mix Feed Bin 2, equipped with a baghouse identified as Tilt Furnace Mix Feed Bins 1 & 2 Baghouse, constructed in 1985, capacity: 0.925 tons per hour.
 - (3) One (1) Tilt Furnace Mix Feed Bin 3, equipped with a baghouse identified as Tilt Furnace Mix Feed Bin 3 Baghouse, constructed in 1985, capacity: 0.925 tons per hour.
 - (4) One (1) Tilt Furnace, equipped with a baghouse identified as Tilt Fume Collector Baghouse, constructed in 1986, capacity: 0.925 tons per hour.
 - (5) One (1) Tilt Furnace Cyclone, equipped with a baghouse identified as Tilt Furnace HSA Baghouse, constructed in 1985, capacity: 0.925 tons per hour.
 - (6) One (1) Tilt Furnace Bulk Bagger, equipped with a baghouse identified as Tilt Furnace HSA Baghouse, constructed in 1985, capacity: 0.925 tons per hour.
 - (7) One (1) Tilt Furnace Attrition Mill, equipped with a baghouse identified as Tilt Furnace HSA Baghouse, constructed in 1985, capacity: 0.925 tons per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Facility Description [326 IAC 2-7-5(15)] (continued):

- (c) One (1) Submerged Electric Furnace I (SEF I) Process consisting of:
 - (1) One (1) SEF I Mix Feed Bin, equipped with a baghouse identified as SEF I Mix Feed Bin Venting Baghouse, constructed in 1988, capacity: 0.675 tons per hour.
 - (2) One (1) SEF I Furnace, equipped with a baghouse identified as SEF I Furnace Baghouse, constructed in 1986, capacity: 0.675 tons per hour.
 - (3) One (1) SEF I Collector, equipped with a baghouse identified as SEF I Collector Baghouse, constructed in 1991, capacity: 0.675 tons per hour.
 - (4) One (1) SEF I Bulk Bagger, equipped with a baghouse identified as SEF I Downline Baghouse, constructed in 1985, capacity: 0.675 tons per hour.
- (d) One (1) Submerged Electric Furnace II (SEF II) Process consisting of:
 - (1) One (1) SEF II Mix Feed Bin 1, equipped with a baghouse identified as SEF II Mix Feed Bin 1 Bin Venting Baghouse, constructed in 1988, capacity: 1.4 tons per hour.
 - (2) One (1) SEF II Mix Feed Bin 2, equipped with a baghouse identified as SEF II Mix Feed Bin 2 Bin Venting Baghouse, constructed in 1988, capacity: 1.4 tons per hour.
 - (3) One (1) SEF II Furnace, equipped with a baghouse identified as SEF II Furnace Baghouse, constructed in 1988, capacity: 1.4 tons per hour.
 - (4) One (1) SEF II Packaging Equipment, equipped with a baghouse identified as SEF II Downline Baghouse, constructed between 1988 and 1990, capacity: 1.4 tons per hour.
 - (5) One (1) SEF II Cyclone, equipped with a baghouse identified as SEF II Cyclone Baghouse, constructed in 1996, capacity: 1.4 tons per hour.
 - (6) One (1) SEF II Collector, equipped with a baghouse identified as SEF II Collector Baghouse, constructed in 1996, capacity: 1.4 tons per hour.
- (e) One (1) Submerged Electric Furnace III (SEF III) Process consisting of:
 - (1) One (1) SEF III Mix Feed Bin 1, equipped with a baghouse identified as SEF III Mix Feed Bin 1 Bin Venting Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (2) One (1) SEF III Mix Feed Bin 2, equipped with a baghouse identified as SEF III Mix Feed Bin 2 Bin Venting Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (3) One (1) SEF III Slag Reclaim Bin, equipped with a baghouse identified as SEF III Slag Reclaim Bin Venting Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (4) One (1) SEF III Furnace, equipped with a baghouse identified as SEF III Furnace Baghouse, constructed in 1986, capacity: 1.4 tons per hour.
 - (5) One (1) SEF III Collector, equipped with a baghouse identified as SEF III Collector Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (6) One (1) SEF III Needler, equipped with a baghouse identified as SEF III Downline Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (7) One (1) SEF III Wet Slitter, equipped with a baghouse identified as SEF III Downline Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (8) One (1) SEF III Roll-up Machine, equipped with a baghouse identified as SEF III Downline Baghouse, constructed in 1985, capacity: 1.4 tons per hour.

Facility Description [326 IAC 2-7-5(15)] (continued):

- (9) One (1) SEF III Guillotine, equipped with a baghouse identified as SEF III Downline Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
- (10) One (1) SEF III Attrition Mill, equipped with a baghouse identified as SEF III Downline Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
- (f) One (1) Submerged Electric Furnace IV (SEF IV) Process consisting of:
 - (1) One (1) SEF IV Mix Feed Bin 1, equipped with a baghouse identified as SEF IV Mix Feed Bin 1 Bin Venting Baghouse, constructed in 1997, capacity: 0.95 tons per hour.
 - (2) One (1) SEF IV Mix Feed Bin 2, equipped with a baghouse identified as SEF IV Mix Feed Bin 2 Bin Venting Baghouse, constructed in 1997, capacity: 0.95 tons per hour.
 - (3) One (1) SEF IV Furnace, equipped with a baghouse identified as SEF IV Furnace Baghouse, constructed in 1997, capacity: 0.95 tons per hour.
 - (4) One (1) SEF IV Attrition Mill, equipped with a baghouse identified as SEF IV Downline Baghouse, constructed in 1997, capacity: 0.95 tons per hour.
 - (5) One (1) SEF IV Cyclone & Bulk Bagger, equipped with a baghouse identified as SEF IV Downline Baghouse, constructed in 1997, capacity: 0.95 tons per hour.
- (g) One (1) Vacuum Casting Process consisting of:
 - (1) One (1) Vacuum Cast Mix Tank 1, equipped with a baghouse identified as Vacuum Cast Mix Tanks Baghouse, constructed in 1982, capacity: 1 ton per hour.
 - (2) One (1) Vacuum Cast Mix Tank 2, equipped with a baghouse identified as Vacuum Cast Mix Tanks Baghouse, constructed in 1982, capacity: 1 ton per hour.
 - (3) One (1) Vacuum Cast Board Sander, equipped with a baghouse identified as Vacuum Cast Board Sander Baghouse, constructed in 1978, capacity: 1 ton per hour.
 - (4) One (1) Vacuum Cast Board Saw System, equipped with a baghouse identified as Vacuum Cast Board Saw System Baghouse, constructed in 1996, capacity: 1 ton per hour.
- (h) One (1) Fabricated Products Area consisting of:
 - (1) One (1) Fabricated Products Area consisting of folding, banding, and module-making machines, equipped with a baghouse identified as Fabricated Products Area Equipment Baghouse 1, constructed in 1981, capacity: 2 tons per hour.
 - (2) One (1) Fabricated Products Area consisting of a v-blender, ball mill, and high-temperature caulk fabrication, equipped with a baghouse identified as Fabricated Products Area Equipment Baghouse 2, constructed in 1981, capacity: 2 tons per hour.
 - (3) One (1) Fabrication Area Vacuum System, equipped with a baghouse identified as Fabrication Area Vacuum System Baghouse, constructed in 1981, capacity: 1 ton per hour.
- (i) One (1) Warehouse Blow-off Booth with particulate emissions controlled by a Warehouse Blow-off Booth filter, constructed in 1981, capacity: 1 ton per hour.
- (j) One (1) ODB Bagger, equipped with a baghouse identified as ODB Baghouse, constructed in 1981, capacity: 0.25 tons per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Facility Description [326 IAC 2-7-5(15)] (continued):

- (k) The following facilities at the Raw Material Handling System:
- (1) One (1) Common Blender Transporter, constructed in 1990, equipped with a baghouse identified as Common Blender Transporter Venting Baghouse, capacity: 0.89 tons per hour.
 - (2) One (1) No. 4 Day Bin H.G. Alumina, constructed in 1990, equipped with a baghouse identified as No. 4 Day Bin H.G. Alumina Bin Venting Baghouse, capacity: 0.89 tons per hour.
 - (3) One (1) No. 5 Day Bin Zircon, constructed in 1990, equipped with a baghouse identified as No. 5 Day Bin Zircon Bin Venting Baghouse, capacity: 0.89 tons per hour.
 - (4) One (1) No. 6 Day Bin Test Material, constructed in 1990, equipped with a baghouse identified as No. 6 Day Bin Test Material Bin Venting Baghouse, capacity: 0.89 tons per hour.
 - (5) One (1) Bad Batch Bin, constructed in 1990, equipped with a baghouse identified as Bad Batch Bin Bin Venting Baghouse, capacity: 0.89 tons per hour.
 - (6) One (1) SEF I, SEF IV, Tilt Blender Transporter, constructed in 1997, equipped with a baghouse identified as SEF I, SEF IV, Tilt Blender Transporter Baghouse, capacity: 0.89 tons per hour.
 - (7) One (1) SEF II, SEF III Blender Transporter, constructed in 1997, equipped with a baghouse identified as SEF II, SEF III Blender Transporter Baghouse, capacity: 0.89 tons per hour.
- (l) The following facility at the Tilt Furnace Process:
- One (1) Tilt Furnace Conveyor, constructed in 1994, equipped with a baghouse identified as Tilt Furnace HSA Baghouse, capacity: 0.925 tons per hour.
- (m) The following facilities at the Submerged Electric Furnace I (SEF I) Process:
- (1) One (1) SEF I Conveyor System, constructed in 1988, equipped with a baghouse identified as SEF I Downline Baghouse, capacity: 0.675 tons per hour.
 - (2) One (1) SEF I Attrition Mill, constructed in 1988, equipped with a baghouse identified as SEF I Downline Baghouse, capacity: 0.675 tons per hour.
 - (3) One (1) SEF I Picker, constructed in 1988, equipped with a baghouse identified as SEF I Downline Baghouse, capacity: 0.675 tons per hour.
- (n) The following facility at the Submerged Electric Furnace II (SEF II) Process:
- One (1) SEF II Attrition Mill, constructed in 1997, equipped with a baghouse identified as SEF II Downline Baghouse, capacity: 1.4 tons per hour.
- (o) The following facilities at the Submerged Electric Furnace III (SEF III) Process:
- (1) One (1) SEF III Conveyor System, constructed in 1985, equipped with a baghouse identified as SEF III Downline Baghouse, capacity: 1.4 tons per hour.
 - (2) One (1) SEF III Bulk Bagger, constructed in 1985, equipped with a baghouse identified as SEF III Downline Baghouse, capacity: 1.4 tons per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Facility Description [326 IAC 2-7-5(15)] (continued):

(p) The following facilities at the Fabricated Products Area:

- (1) One (1) Fabricated Products Area Band Saw System, constructed in 1981, equipped with a baghouse identified as Fabricated Products Area Band Saw System Baghouse, capacity: 1 ton per hour.
- (2) One (1) Fabrication Area Blow-off booth, constructed in 1986, equipped with a filter identified as Fabrication area Blow-off Booth Filter, capacity: 1 ton per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-1] [326 IAC 2-2] [326 IAC 2-3]

- (a) Pursuant to CP 141-2522-00029, issued on January 18, 1995, the PM emissions from the baghouses covered in that permit (listed below) are limited to make the initial source a minor source pursuant to 326 IAC 2-3, Emission Offset, and to comply with 326 IAC 6-1:
- (1) For the Raw Material Storage and Handling Process: The No. 4 Sand Silo Baghouse, No. 3 Alumina Silo Baghouse, No. 1 Kaolin Silo Baghouse, No. 2 Kaolin Silo Baghouse, No. 5 Zircon Silo Baghouse, No. 6 H.G. Alumina Silo Baghouse, and the Alumina Transporter Venting Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm, each; and the No. 2 Day Bin Alumina Bin Venting Baghouse and the No. 3 Day Bin Sand Bin Venting Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 900 dscfm, each.
 - (2) For the Tilt Furnace Process: The Tilt Furnace Mix Feed Bins 1 and 2 Baghouse and the Tilt Furnace Mix Feed Bin 3 Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm, each.
 - (3) For the SEF I Furnace Process: SEF I Mix Feed Bin Venting Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm.
 - (4) For the SEF II Furnace Process: SEF II Mix Feed Bin 1 Bin Venting Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm; and SEF II Mix Feed Bin 2 Bin Venting Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm.
 - (5) For the Spun Furnace Process: SEF III Mix Feed Bin 1 Bin Venting Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm; SEF III Mix Feed Bin 2 Bin Venting Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm; and SEF III Downline Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 18,000 dscfm.
 - (6) For the Vacuum Casting Process: Vacuum Cast Board Sander Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 15,000 dscfm; Vacuum Cast Board Saw System Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 18,000 dscfm; and Vacuum Cast Mix Tanks 1 and 2 Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 7,500 dscfm. In addition, each facility at the vacuum casting process shall be limited to 4,000 hours of operation per consecutive twelve (12) month period.

- (7) For the Fabricated Products Process: Fabricated Products Area Fabrication Equipment Baghouse 1, 0.025 gr/dscf with an input flow rate not to exceed 9,000 dscfm; Fabricated Products Area Fabrication Equipment Baghouse 2, 0.025 gr/dscf with an input flow rate not to exceed 5,000 dscfm; and Fabrication Area Vacuum System Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 1,000 dscfm.
 - (8) For the General Facilities: ODB Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 6,000 dscfm.
 - (9) The limit for the No. 1 Day Bin Kaolin Bin Venting Baghouse was 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm. The source has requested that the limit be changed to 0.025 gr/dscf with an input flow rate not to exceed 900 dscfm. Since this change results in an increase in the emission rate of only 0.086 pounds per hour and 0.376 tons per year, the requested revised limit will appear in the permit.
 - (10) The limit for the SEF III Slag Reclaim Bin Venting Baghouse was 0.025 gr/dscf with an input flow rate not to exceed 200 dscfm. The source has requested that the limit be changed to 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm. Since this change results in an increase in the emission rate of only 0.064 pounds per hour and 0.281 tons per year, the requested revised limit will appear in the permit.
- (b) In order to show that the existing source was a minor source in 1995 pursuant to 326 IAC 2-3, Emission Offset, the following emission units are limited. These limitations are revised from the limitations listed in CP 141-2522-00029. The following limits will also ensure compliance with 326 IAC 6-1:
- (1) Tilt Fume Collector Baghouse, 0.0025 gr/dscf with an input flow rate not to exceed 30,000 dscfm;
 - (2) Tilt Furnace HSA Baghouse, 0.0025 gr/dscf with an input flow rate not to exceed 36,000 dscfm;
 - (3) SEF I Furnace Baghouse, 0.0025 gr/dscf with an input flow rate not to exceed 15,000 dscfm;
 - (4) SEF I Collector Baghouse, 0.0025 gr/dscf with an input flow rate not to exceed 24,000 dscfm;
 - (5) SEF I Downline Baghouse, 0.0054 gr/dscf with an input flow rate not to exceed 18,000 dscfm;
 - (6) SEF II Furnace Baghouse, 0.00218 gr/dscf with an input flow rate not to exceed 20,000 dscfm;
 - (7) SEF II Downline Baghouse, 0.00133 gr/dscf with an input flow rate not to exceed 18,000 dscfm;
 - (8) SEF II Cyclone Baghouse, 0.00111 gr/dscf with an input flow rate not to exceed 30,000 dscfm;
 - (9) SEF III Furnace Baghouse, 0.0025 gr/dscf with an input flow rate not to exceed 20,000 dscfm;

- (10) SEF III Collector Baghouse, 0.000626 gr/dscf with an input flow rate not to exceed 39,000 dscfm; and
 - (11) Fabricated Products Area Band Saw System Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 9,000 dscfm.
- (c) The facilities existing in 1995, but not permitted in CP 141-2522-00029, will be required to comply with the following limitations to make the initial source a minor source pursuant to 326 IAC 2-3, Emission Offset, and to comply with 326 IAC 6-1:
- (1) The Common Blender Transporter, 0.025 gr/dscf with an input flow rate of 500 dscfm;
 - (2) The No.4 Day Bin H.G. Alumina, 0.025 gr/dscf with an input flow rate of 500 dscfm;
 - (3) The No.5 Day Bin Zircon, 0.025 gr/dscf with an input flow rate of 500 dscfm;
 - (4) The No.6 Day Bin Test Material, 0.025 gr/dscf with an input flow rate of 500 dscfm;
 - (5) The Bad Batch Bin, 0.025 gr/dscf with an input flow rate of 500 dscfm;
 - (6) The Fabrication Area Blow-off Booth, 0.025 gr/dscf with an input flow rate of 3,000 dscfm; and
 - (7) The Warehouse Blow-off Booth, 0.025 gr/dscf with an input flow rate 3,000 dscfm.
- (d) The facilities constructed during or after 1996 and not permitted in CP 141-2522-00029, will be required to comply with the following limitations to make the modification a minor modification to an existing minor source pursuant to 326 IAC 2-3, Emission Offset, and 326 IAC 2-2, PSD, and to comply with 326 IAC 6-1:
- (1) The SEF I, SEF IV Tilt Blender Transporter, 0.030 gr/dscf with an input flow rate of 500 dscfm;
 - (2) The SEF II, SEF III Tilt Blender Transporter, 0.030 gr/dscf with an input flow rate of 500 dscfm;
 - (3) The SEF II Collector, 0.030 gr/dscf with an input flow rate of 40,000 dscfm;
 - (4) The SEF IV Mix Feed Bin 1, 0.030 gr/dscf with an input flow rate of 500 dscfm;
 - (5) The SEF IV Mix Feed Bin 2, 0.030 gr/dscf with an input flow rate of 500 dscfm;
 - (6) The SEF IV Furnace, 0.030 gr/dscf with an input flow rate of 20,000 dscfm; and
 - (7) The SEF IV Attrition Mill, Cyclone and Bulk Bagger, all exhausting to the SEF IV Downline baghouse, 0.030 gr/dscf with an input flow rate of 22,000 dscfm.

D.1.2 Non-applicable Requirements [326 IAC 2-3] [326 IAC 6-3-2]

- (a) Operation Condition 11 from CP 141-6517-00029, issued on December 20, 1996, which states that pursuant to 326 IAC 6-3 (Process Operations), particulate matter from the SEF II line shall be limited to:

- (1) 0.028 lbs/hr from each of the mix feed bin baghouses (19A and 19B),
- (2) 1.12 lbs/hr from the fume hood baghouse (20),
- (3) 0.705 lbs/hr from the cyclone baghouse (21),
- (4) 1.24 lbs/hr from the downline equipment baghouse (22), and
- (5) 2.25 lbs/hr from the fiber collector baghouse (45),

is not applicable because, the above listed facilities will be limited to make the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable, and to comply with 326 IAC 6-1, as stated in (d) of Condition D.1.1 of this permit.

- (b) Operation Condition 12 from CP 141-6517-00029, issued on December 20, 1996, which states that pursuant to 326 IAC 6-3 (Process Operations), particulate matter from the SEF IV line shall be limited to:

- (1) 0.054 lbs/hr from each of the mix feed bin baghouses (48 and 49),
- (2) 2.15 lbs/hr from the fume hood baghouse (46), and
- (3) 2.37 lbs/hr from the cyclone baghouse (47),

is not applicable because, the above listed facilities will be limited to make the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable, and to comply with 326 IAC 6-1, as stated in (d) of Condition D.1.1 of this permit.

- (c) Operation Condition 5(h)(1) from CP 141-2522-00029, issued on January 18, 1995, which states that the PM emissions from Point Id #40 shall be limited to 0.025 gr/dscf with an input flow rate not to exceed 2,500 dscfm, is not applicable because the facility no longer exists.
- (d) Operation Condition 5(a)(6) from CP 141-2522-00029, issued on January 18, 1995, which states that the PM emissions from Point Id #6 (now referred to as No. 1 Day Bin Kaolin Bin Venting Baghouse) shall be limited to 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm, is not applicable because the source has requested that the limit for the No. 1 Day Bin Kaolin Bin Venting Baghouse be changed to 0.025 gr/dscf with an input flow rate not to exceed 900 dscfm. The revised limit will still make 326 IAC 2-2 and 326 IAC 2-3 not applicable and result in compliance with 326 IAC 6-1.
- (e) Operation Condition 5(e)(5) from CP 141-2522-00029, issued on January 18, 1995, which states that the PM emissions from Point Id #28 (now referred to as Slag Reclaim Bin Venting Baghouse), 0.025 gr/dscf with an input flow rate not to exceed 200 dscfm, is not applicable because the source has requested that the limit for the Slag Reclaim Bin Venting Baghouse be changed to 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm. The revised limit will still make 326 IAC 2-2 and 326 IAC 2-3 not applicable and result in compliance with 326 IAC 6-1.

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.1.4 Particulate Matter (PM)

The baghouses and filters for PM control shall be in operation and control emissions from the corresponding facilities at all times that the facilities are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.5 Monitoring

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the Fabrication Area Blow-off Booth filter and Warehouse Blow-off Booth filter on any day that such booth is operated. To monitor the performance of the dry filters, weekly observations of particulate emissions shall be made from the blow-off booth stacks while the booths are in operation, during such weeks that the booths operate. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) Monthly inspections shall be performed of the particulate emissions from the stack and the presence of particulate on the rooftops and the nearby ground. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when a noticeable change in particulate emission, or evidence of particulate emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

D.1.6 Visible Emissions Notations

- (a) Visible emission notations of all stack exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.7 Parametric Monitoring

The Permittee shall record the total static pressure drop across all baghouses used in conjunction with the high-heat insulating materials manufacturing source, in the following manner:

- (a) For the Raw Material Bin Venting Baghouses (Silos Loaded from Railcars), parametric monitoring shall be performed once per shift. The magnehelic measuring the pressure drop across the bin venting baghouse controlling emissions from the silo currently being loaded is to be read (i.e., one time during the unloading of a specific railcar to a specific silo), and the reading recorded. The pressure drop from that silo's bin venting baghouse shall be noted and recorded, but only during such time as no material is being transported from that specific silo to a day bin. In the event that no silo is being loaded, the condition of "non-use" shall be recorded. The Raw Material Bin Venting Baghouses are:

No. 1 Kaolin Silo Baghouse
No. 2 Kaolin Silo Baghouse
No. 3 Alumina Silo Baghouse
No. 4 Sand Silo Baghouse
No. 5 Zircon Silo Baghouse
No. 6 H.G. Alumina Silo Baghouse

- (b) For the Raw Material Day Bin "Bin Venting Baghouses," parametric monitoring shall be performed once per shift. The magnehelics measuring the pressure drop across the bin venting baghouses controlling emissions from the Raw Material Day Bins are to be read when the day bins are in operation. In the event that any day bin is not in operation at the time of the reading, the condition of "non-use" of such day bin shall be recorded. The Raw Material Day Bin "Bin Venting Baghouses" are:

Alumina Transporter Venting Baghouse
No. 1 Day Bin Kaolin Bin Venting Baghouse
No. 2 Day Bin Alumina Bin Venting Baghouse
No. 3 Day Bin Sand Bin Venting Baghouse
Common Blender Transporter Venting Baghouse
No. 4 Day Bin H.G. Alumina Bin Venting Baghouse
No. 5 Day Bin Zircon Bin Venting Baghouse
No. 6 Day Bin Test Material Bin Venting Baghouse
Bad Batch Bin Bin Venting Baghouse
SEF I, SEF IV, Tilt Blender Transporter Baghouse
SEF II, SEF III Blender Transporter Baghouse

- (c) For the Mix (Furnace) Feed Bins "Bin Venting Baghouses," parametric monitoring shall be performed once per twelve (12) -hour shift (twice per day), at specific times to be set. The magnehelics measuring the pressure drop across the bin venting baghouses controlling emissions from the furnaces' Mix Feed Bins are to be read by the furnace operator when the Mix Feed Bins are in operation. In the event that any Mix Feed Bin is not in operation at the time of the reading, the condition of "non-use" of such bin shall be recorded. The Mix (Furnace) Feed Bins "Bin Venting Baghouses" are:

SEF I Mix Feed Bin Venting Baghouse
SEF II Mix Feed Bin 1 Bin Venting Baghouse
SEF II Mix Feed Bin 2 Bin Venting Baghouse
SEF III Mix Feed Bin 1 Bin Venting Baghouse
SEF III Mix Feed Bin 2 Bin Venting Baghouse
SEF III Slag Reclaim Bin Venting Baghouse
SEF IV Mix Feed Bin 1 Bin Venting Baghouse
SEF IV Mix Feed Bin 2 Bin Venting Baghouse
Tilt Furnace Mix Feed Bins 1 & 2 Baghouse

Tilt Furnace Mix Feed Bin 3 Baghouse

- (d) For the Furnace Baghouses, parametric monitoring shall be performed once per twelve (12)-hour shift (twice per day), at specific times to be set, the magnehelics measuring the pressure drop across the baghouses controlling emissions from the furnaces are to be read by the furnace operator when the specific furnace is in operation. In the event that any furnace is not in operation at the time of the reading, the condition of "non-use" of such furnace shall be recorded. The Furnace Baghouses are:

SEF I Furnace Baghouse
SEF II Furnace Baghouse
SEF III Furnace Baghouse
SEF IV Furnace Baghouse
Tilt Fume Collector Baghouse

- (e) For the Furnace Collector Baghouses, "Downline" Baghouses, parametric monitoring shall be performed once per twelve (12)-hour shift. The magnehelics measuring the pressure drop across the baghouses controlling emissions from the furnace collectors and "downline" facilities are to be read during times when the baghouses are in operation. The Furnace Collector Baghouses, "Downline" Baghouses are:

SEF I Collector Baghouse
SEF I Downline Baghouse
SEF II Cyclone Baghouse
SEF II Downline Baghouse
SEF III Collector Baghouse
SEF III Downline Baghouse
SEF IV Downline Baghouse
Tilt Furnace HSA Baghouse

- (f) For the Fabricated Products and Vacuum Cast Baghouses, parametric monitoring shall be performed once per twelve (12)-hour shift. The magnehelics measuring the pressure drop across the baghouses controlling emissions from Fabricated Products and Vacuum Cast facilities are to be read by production personnel when such facilities are in operation. The Fabricated Products and Vacuum Cast Baghouses are:

Fabricated Products Area Band Saw System Baghouse
Fabricated Products Area Equipment Baghouse 1
Fabricated Products Area Equipment Baghouse 2
Fabrication Area Vacuum System Baghouse
Vacuum Cast Board Sander Baghouse
Vacuum Cast Board Saw System Baghouse
Vacuum Cast Mix Tanks Baghouse

Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 1.0 and 5.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at

least once every six (6) months.

D.1.8 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the operations at this source when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.1.9 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.10 Record Keeping Requirements

- (a) To document compliance with Condition D.1.6, the Permittee shall maintain records of visible emission notations of all stack exhausts once per shift during normal daylight operations, when exhausting to the atmosphere.
- (b) To document compliance with Condition D.1.7, the Permittee shall maintain the following:
 - (1) Records of the following operational parameters at frequencies described in Condition D.1.7 during normal operation when venting to the atmosphere:

Inlet and outlet differential static pressure
 - (2) Documentation of the dates vents are redirected.
- (c) To document compliance with Condition D.1.8, the Permittee shall maintain records of the results of the inspections required under Condition D.1.8 and the dates the vents are redirected.
- (d) To document compliance with Condition D.1.5, the Permittee shall maintain a log of weekly particulate observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (e) To document compliance with Condition D.1.1(a)(6), the Permittee shall maintain monthly records of the hours of operation at each facility at the vacuum casting process.

- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.11 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1(a)(6) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Insignificant Activities

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:

One (1) Tilt Furnace Boiler, capacity: 7 million British thermal units per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1-2(b)(5) (Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from the one (1) insignificant boiler shall be limited to 0.01 grain per dry standard cubic foot.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
AIR COMPLIANCE BRANCH**

**PART 70 OPERATING PERMIT
CERTIFICATION**

Source Name: Unifrax Corporation, New Carlisle Facility
Source Address: 54401 Smilax Road, New Carlisle, Indiana 46552
Mailing Address: 54401 Smilax Road, New Carlisle, Indiana 46552
Part 70 Permit No.: T 141-7925-00029

**This certification shall be included when submitting monitoring, testing reports/results
or other documents as required by this permit.**

Please check what document is being certified:

9 Annual Compliance Certification Letter

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Affidavit (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Unifrax Corporation, New Carlisle Facility
Source Address: 54401 Smilax Road, New Carlisle, Indiana 46552
Mailing Address: 54401 Smilax Road, New Carlisle, Indiana 46552
Part 70 Permit No.: T 141-7925-00029

This form consists of 2 pages Page 1 of 2

- 9** This is an emergency as defined in 326 IAC 2-7-1(12)
- C** The Permittee must notify the Office of Air Quality (OAQ), within four **(4)** business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
 - C** The Permittee must submit notice in writing or by facsimile within two **(2)** days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency:

Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Unifrax Corporation, New Carlisle Facility
Source Address: 54401 Smilax Road, New Carlisle, Indiana 46552
Mailing Address: 54401 Smilax Road, New Carlisle, Indiana 46552
Part 70 Permit No.: T 141-7925-00029

Months: _____ to _____ Year: _____

Page 1 of 2

This report is an affirmation that the source has met all the requirements stated in this permit. This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
AIR COMPLIANCE BRANCH**

Part 70 Quarterly Report

Source Name: Unifrax Corporation, New Carlisle Facility
Source Address: 54401 Smilax Road, New Carlisle, Indiana 46552
Mailing Address: 54401 Smilax Road, New Carlisle, Indiana 46552
Part 70 Permit No.: T 141-7925-00029
Facilities: Vacuum Cast Mix Tanks 1 and 2
Parameter: Operating hours (hours with potential PM emissions)
Limit: Operating hours of no more than 4,000 hours per year

YEAR: _____

Month	Operating Hours	Operating Hours	Operating Hours
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
AIR COMPLIANCE BRANCH**

Part 70 Quarterly Report

Source Name: Unifrax Corporation, New Carlisle Facility
Source Address: 54401 Smilax Road, New Carlisle, Indiana 46552
Mailing Address: 54401 Smilax Road, New Carlisle, Indiana 46552
Part 70 Permit No.: T 141-7925-00029
Facilities: Vacuum Cast Board Sander
Parameter: Operating hours (hours with potential PM emissions)
Limit: Operating hours of no more than 4,000 hours per year

YEAR: _____

Month	Operating Hours	Operating Hours	Operating Hours
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
AIR COMPLIANCE BRANCH**

Part 70 Quarterly Report

Source Name: Unifrax Corporation, New Carlisle Facility
Source Address: 54401 Smilax Road, New Carlisle, Indiana 46552
Mailing Address: 54401 Smilax Road, New Carlisle, Indiana 46552
Part 70 Permit No.: T 141-7925-00029
Facilities: Vacuum Board Saw System
Parameter: Operating hours (hours with potential PM emissions)
Limit: Operating hours of no more than 4,000 hours per year

YEAR: _____

Month	Operating Hours	Operating Hours	Operating Hours
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for a Part 70 Operating Permit

Source Name: Unifrax Corporation, New Carlisle Facility
Source Location: 54401 Smilax Road, New Carlisle, Indiana 46552
County: St. Joseph
SIC Code: 3299
Operation Permit No.: T 141-7925-00029
Permit Reviewer: CarrieAnn Ortolani

On December 9, 2000, the Office of Air Quality (OAQ) had a notice published in the South Bend Tribune, South Bend, Indiana, stating that Unifrax Corporation, New Carlisle Facility had applied for a Part 70 Operating Permit to operate a high-heat insulating materials manufacturing source with baghouses and filters as controls. The notice also stated that OAQ proposed to issue a Part 70 Operating Permit for this operation and provided information on how the public could review the proposed Part 70 Operating Permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this Part 70 Operating Permit should be issued as proposed.

On December 12, 2000, Randy Martin of Industrial Safety and Environmental Services, Inc., on behalf of Unifrax Corporation, New Carlisle Facility, submitted comments on the proposed Part 70 Operating Permit. The comments are as follows (The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**.):

Comment 1:

D.1.5, Daily inspections shall be performed to verify the placement, integrity and particle loading of the Fabrication Area blow-off Booth filter and Warehouse Blow-off Booth filter; we'd like to only monitor the filter IF the booth has been used that day. [COMMENT: If the booth HASN'T been used in a week, we'd like to skip the monitoring of exhaust.]

Response 1:

Condition D.1.5(a) specifies that the weekly observations are required while the booths are in operation. Therefore, no weekly monitoring is required if the booths are not used in a week. Condition D.1.5 is revised to clarify the requirements as follows:

D.1.5 Monitoring

-
- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the Fabrication Area Blow-off Booth filter and Warehouse Blow-off Booth filter **on any day that such booth is operated**. To monitor the performance of the dry filters, weekly observations **of particulate emissions** shall be made ~~of the particulate~~ from the blow-off booth stacks while the booths are in operation, **during such weeks that the booths operate**. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

- (b) Monthly inspections shall be performed of the particulate emissions from the stack and the presence of particulate on the rooftops and the nearby ground. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when a noticeable change in particulate emission, or evidence of particulate emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Comment 2:

D.1.6, Visible Emission Notations; we'd like these once per "day" shift, as the night shifts will not be able to see the exhausts.

Response 2:

As indicated in Condition D.1.6(a), "visible emission notations of all stack exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere." Therefore, visible emission notations are required only during daylight. If there is no daylight during an entire shift, no visible emission notations are required.

Comment 3:

D.1.7, Parametric Monitoring: we request that Unifrax take baghouse readings once per week instead of once per shift. It would involve considerable expense to cable the plant to capture data, along with the expense of electronic pressure monitors. (Please note that the air volume throughput on these baghouses is REQUIRED at specified levels for material transport; materials simply would not transport if bags were blocked, or if the collection system were leaking air to the atmosphere; the damage to Unifrax production processes would be immediately apparent, and the cause would be investigated.)

Response 3:

See Comment 4 and Response 4.

On February 15, 2001, Randy Martin of Industrial Safety and Environmental Services, Inc., on behalf of Unifrax Corporation, New Carlisle Facility, submitted additional comments on the proposed Part 70 Operating Permit. The comments are as follows (The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**.):

Comment 4:

The following are changes requested for Condition D.1.7, Parametric Monitoring:

The Permittee shall record the total static pressure drop across all baghouses used in conjunction with

the high-heat insulating materials manufacturing source in the following manner:

- (a) Section I: Raw Material Bin Venting Baghouses (Silos Loaded from Railcars): once per day shift, the magnehelic measuring the pressure drop across the bin venting baghouse controlling emissions from the silo currently being loaded is to be read (i.e., one time during the unloading of a specific railcar to a specific silo), and the reading recorded. The pressure drop from that silo's bin venting baghouse shall be noted and recorded, but only during such time as no material is being transported from that specific silo to a day bin. In the event that no silo is being loaded, the condition of "non-use" shall be recorded. The affected baghouses are:

No. 1 Kaolin Silo Baghouse
No. 2 Kaolin Silo Baghouse
No. 3 Alumina Silo Baghouse
No. 4 Sand Silo Baghouse
No. 5 Zircon Silo Baghouse
No. 6 H.G. Alumina Silo Baghouse

- (b) Section II: Raw Material Day Bin "Bin Venting Baghouses": once per day shift, the magnehelics measuring the pressure drop across the bin venting baghouses controlling emissions from the Raw Material Day Bins are to be read when the day bins are in operation. In the event that any day bin is not in operation at the time of the reading, the condition of "non-use" of such day bin shall be recorded. The affected baghouses are:

Alumina Transporter Venting Baghouse
No. 1 Day Bin Kaolin Bin Venting Baghouse
No. 2 Day Bin Alumina Bin Venting Baghouse
No. 3 Day Bin Sand Bin Venting Baghouse
Common Blender Transporter Venting Baghouse
No. 4 Day Bin H.G. Alumina Bin Venting Baghouse
No. 5 Day Bin Zircon Bin Venting Baghouse
No. 6 Day Bin Test Material Bin Venting Baghouse
Bad Batch Bin Bin Venting Baghouse
SEF I, SEF IV, Tilt Blender Transporter Baghouse
SEF II, SEF III Blender Transporter Baghouse

- (c) Section III: Mix (Furnace) Feed Bins "Bin Venting Baghouses": once per 12-hour shift (twice per day), at specific times to be set, the magnehelics measuring the pressure drop across the bin venting baghouses controlling emissions from the furnaces' Mix Feed Bins are to be read by the furnace operator when the Mix Feed Bins are in operation. In the event that any Mix Feed Bin is not in operation at the time of the reading, the condition of "non-use" of such bin shall be recorded. The affected baghouses are:

SEF I Mix Feed Bin Venting Baghouse
SEF II Mix Feed Bin 1 Bin Venting Baghouse
SEF II Mix Feed Bin 2 Bin Venting Baghouse
SEF III Mix Feed Bin 1 Bin Venting Baghouse
SEF III Mix Feed Bin 2 Bin Venting Baghouse
SEF III Slag Reclaim Bin Venting Baghouse
SEF IV Mix Feed Bin 1 Bin Venting Baghouse

SEF IV Mix Feed Bin 2 Bin Venting Baghouse
Tilt Furnace Mix Feed Bins 1 & 2 Baghouse
Tilt Furnace Mix Feed Bin 3 Baghouse

- (d) Section IV: Furnace Baghouses: once per 12-hour shift (twice per day), at specific times to be set, the magnehelics measuring the pressure drop across the baghouses controlling emissions from the furnaces are to be read by the furnace operator when the specific furnace is in operation. In the event that any furnace is not in operation at the time of the reading, the condition of "non-use" of such furnace shall be recorded. The affected baghouses are:

SEF I Furnace Baghouse
SEF II Furnace Baghouse
SEF III Furnace Baghouse
SEF IV Furnace Baghouse
Tilt Fume Collector Baghouse

- (e) Section V: Furnace Collector Baghouses, "Downline" Baghouses: once per week, the magnehelics measuring the pressure drop across the baghouses controlling emissions from the furnace collectors and "downline" facilities are to be read during times when the baghouses are in operation. Within ninety days of the issuance of the Permit, the source is to collect representative materials which are captured and controlled by the "Collector" and "Downline" baghouses to determine by means of sieve tests that an extremely low percentage (by weight) of the materials controlled by these baghouses is # 100 micron in diameter (and therefore not defined as "airborne"). The Office of Air Quality will determine, based on the results of sieving, whether the source may continue to monitor pressure drop once a week or whether more frequent monitoring is required. The affected baghouses are:

SEF I Collector Baghouse
SEF I Downline Baghouse
SEF II Cyclone Baghouse
SEF II Downline Baghouse
SEF III Collector Baghouse
SEF III Downline Baghouse
SEF IV Downline Baghouse
Tilt Furnace HSA Baghouse

- (f) Section VI: Fabricated Products and Vacuum Cast Baghouses: once per day, the magnehelics measuring the pressure drop across the baghouses controlling emissions from Fabricated Products and Vacuum Cast facilities are to be read by production personnel when such facilities are in operation. The affected baghouses are:

Fabricated Products Area Band Saw System Baghouse
Fabricated Products Area Equipment Baghouse 1
Fabricated Products Area Equipment Baghouse 2
Fabrication Area Vacuum System Baghouse
Vacuum Cast Board Sander Baghouse
Vacuum Cast Board Saw System Baghouse
Vacuum Cast Mix Tanks Baghouse

The instrument used for determining the pressure shall be a magnehelic gauge supplied by the Dwyer Instrument Company of Michigan City, Indiana which will possess incremental markings of pressure differential at not less than 0.2 pounds water pressure per gauge marking.

Response 4:

Due to the type of operations performed and the feasibility of performing parametric monitoring on each baghouse, many of the requested changes to Condition D.1.7 are made. The Raw Material Bin Venting Baghouses are used to control emissions from the silos loaded from railcars. It takes one (1) shift to unload a railcar and one (1) railcar is unloaded at a time. Therefore, the baghouse associated with the silo being loaded is monitored once during each loading. The Mix (Furnace) Feed Bins "Bin Venting Baghouses" are automatic and are about sixty (60) to eighty (80) feet above the ground. It is difficult to tell which baghouse is operating from the ground. Therefore, at a set time once per shift, the Permittee will determine which baghouses are operating and monitor those baghouses. The furnaces have twelve (12) -hour shifts. Therefore, the baghouses for the Furnaces and the Mix (Furnace) Feed Bins will have parametric monitoring once per twelve (12)-hour shift. Condition C.14, Pressure Gauge Specifications, are revised as indicated in Response 6. All of these revisions have been reviewed and approved by the Compliance Branch. Condition D.1.7 is revised as follows:

D.1.7 Parametric Monitoring

The Permittee shall record the total static pressure drop across all baghouses used in conjunction with the high-heat insulating materials manufacturing source, **in the following manner:**

- (a) **For the Raw Material Bin Venting Baghouses (Silos Loaded from Railcars), parametric monitoring shall be performed once per shift. The magnehelic measuring the pressure drop across the bin venting baghouse controlling emissions from the silo currently being loaded is to be read (i.e., one time during the unloading of a specific railcar to a specific silo), and the reading recorded. The pressure drop from that silo's bin venting baghouse shall be noted and recorded, but only during such time as no material is being transported from that specific silo to a day bin. In the event that no silo is being loaded, the condition of "non-use" shall be recorded. The Raw Material Bin Venting Baghouses are:**

**No. 1 Kaolin Silo Baghouse
No. 2 Kaolin Silo Baghouse
No. 3 Alumina Silo Baghouse
No. 4 Sand Silo Baghouse
No. 5 Zircon Silo Baghouse
No. 6 H.G. Alumina Silo Baghouse**

- (b) **For the Raw Material Day Bin "Bin Venting Baghouses," parametric monitoring shall be performed once per shift. The magnehelics measuring the pressure drop across the bin venting baghouses controlling emissions from the Raw Material Day Bins are to be read when the day bins are in operation. In the event that any day bin is not in operation at the time of the reading, the condition of "non-use" of such day bin shall be recorded. The Raw Material Day Bin "Bin Venting Baghouses" are:**

**Alumina Transporter Venting Baghouse
No. 1 Day Bin Kaolin Bin Venting Baghouse**

**No. 2 Day Bin Alumina Bin Venting Baghouse
No. 3 Day Bin Sand Bin Venting Baghouse
Common Blender Transporter Venting Baghouse
No. 4 Day Bin H.G. Alumina Bin Venting Baghouse
No. 5 Day Bin Zircon Bin Venting Baghouse
No. 6 Day Bin Test Material Bin Venting Baghouse
Bad Batch Bin Bin Venting Baghouse
SEF I, SEF IV, Tilt Blender Transporter Baghouse
SEF II, SEF III Blender Transporter Baghouse**

- (c) For the Mix (Furnace) Feed Bins "Bin Venting Baghouses," parametric monitoring shall be performed once per twelve (12) -hour shift (twice per day), at specific times to be set. The magnehelics measuring the pressure drop across the bin venting baghouses controlling emissions from the furnaces' Mix Feed Bins are to be read by the furnace operator when the Mix Feed Bins are in operation. In the event that any Mix Feed Bin is not in operation at the time of the reading, the condition of "non-use" of such bin shall be recorded. The Mix (Furnace) Feed Bins "Bin Venting Baghouses" are:

**SEF I Mix Feed Bin Venting Baghouse
SEF II Mix Feed Bin 1 Bin Venting Baghouse
SEF II Mix Feed Bin 2 Bin Venting Baghouse
SEF III Mix Feed Bin 1 Bin Venting Baghouse
SEF III Mix Feed Bin 2 Bin Venting Baghouse
SEF III Slag Reclaim Bin Venting Baghouse
SEF IV Mix Feed Bin 1 Bin Venting Baghouse
SEF IV Mix Feed Bin 2 Bin Venting Baghouse
Tilt Furnace Mix Feed Bins 1 & 2 Baghouse
Tilt Furnace Mix Feed Bin 3 Baghouse**

- (d) For the Furnace Baghouses, parametric monitoring shall be performed once per twelve (12) -hour shift (twice per day), at specific times to be set, the magnehelics measuring the pressure drop across the baghouses controlling emissions from the furnaces are to be read by the furnace operator when the specific furnace is in operation. In the event that any furnace is not in operation at the time of the reading, the condition of "non-use" of such furnace shall be recorded. The Furnace Baghouses are:

**SEF I Furnace Baghouse
SEF II Furnace Baghouse
SEF III Furnace Baghouse
SEF IV Furnace Baghouse
Tilt Fume Collector Baghouse**

- (e) For the Furnace Collector Baghouses, "Downline" Baghouses, parametric monitoring shall be performed once per twelve (12)-hour shift. The magnehelics measuring the pressure drop across the baghouses controlling emissions from the furnace collectors and "downline" facilities are to be read during times when the baghouses are in operation. The Furnace Collector Baghouses, "Downline" Baghouses are:

**SEF I Collector Baghouse
SEF I Downline Baghouse
SEF II Cyclone Baghouse
SEF II Downline Baghouse
SEF III Collector Baghouse
SEF III Downline Baghouse
SEF IV Downline Baghouse
Tilt Furnace HSA Baghouse**

- (f) **For the Fabricated Products and Vacuum Cast Baghouses, parametric monitoring shall be performed once per twelve (12)-hour shift. The magnehelics measuring the pressure drop across the baghouses controlling emissions from Fabricated Products and Vacuum Cast facilities are to be read by production personnel when such facilities are in operation. The Fabricated Products and Vacuum Cast Baghouses are:**

**Fabricated Products Area Band Saw System Baghouse
Fabricated Products Area Equipment Baghouse 1
Fabricated Products Area Equipment Baghouse 2
Fabrication Area Vacuum System Baghouse
Vacuum Cast Board Sander Baghouse
Vacuum Cast Board Saw System Baghouse
Vacuum Cast Mix Tanks Baghouse**

~~at least once per shift when the process exhausting to that baghouse is in operation when venting to the atmosphere.~~ Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 1.0 and 5.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

Comment 5:

The following are changes requested for Condition D.1.10, Record Keeping Requirements:

- (a) To document compliance with Condition D.1.6, the Permittee shall maintain records of visible emission notations of all stack exhausts once per daylight (4 am to 4 pm) shift.
- (b) Records of the operational parameters indicated in Condition D.1.10(b) at frequencies described in Condition D.1.7 (rather than once per shift) during normal operation when venting to the atmosphere.
- (c) Records of the cleaning cycle frequency and differential pressure shall be removed.

Response 5:

Since there are varying hours of daylight during each day of the year, hours of daylight will not be specified in the permit. Condition D.1.10 is revised as follows:

D.1.10 Record Keeping Requirements

- (a) To document compliance with Condition D.1.6, the Permittee shall maintain records of visible emission notations of all stack exhausts once per shift **during normal daylight operations, when exhausting to the atmosphere.**
- (b) To document compliance with Condition D.1.7, the Permittee shall maintain the following:
 - (1) Records of the following operational parameters **at frequencies described in Condition D.1.7** ~~once per shift~~ during normal operation when venting to the atmosphere:
 - ~~(A) Inlet and outlet differential static pressure; and~~
 - ~~(B) Cleaning cycle: frequency and differential pressure~~
 - (2) Documentation of the dates vents are redirected.
- (c) To document compliance with Condition D.1.8, the Permittee shall maintain records of the results of the inspections required under Condition D.1.8 and the dates the vents are redirected.
- (d) To document compliance with Condition D.1.5, the Permittee shall maintain a log of weekly particulate observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (e) To document compliance with Condition D.1.1(a)(6), the Permittee shall maintain monthly records of the hours of operation at each facility at the vacuum casting process.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Comment 6:

In Condition C.14, Pressure Gauge Specifications, the requested change is that whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall be a magnehelic gauge supplied by Dwyer Instruments of Michigan City, Indiana and will have a scale that reads not less than 0.2 pounds water pressure per marking, instead of an instrument having a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.

Response 6:

This comment has been reviewed by the OAQ inspector for this source and the changes have been determined acceptable. Both options are now contained in Condition C.14. Condition C.14 is revised

as follows:

C.14 Pressure Gauge Specifications

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall **be a magnehelic gauge and will have a scale that reads not less than 0.2 pounds water pressure per marking, or** have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.

Upon further review, the OAQ has decided to make the following changes to the Part 70 Operating Permit: The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language is **bolded**):

Change 1:

The name of IDEM's "Office of Air Management" was changed to "Office of Air Quality" on January 1, 2001. All references to "Office of Air Management" in the permit have been changed to "Office of Air Quality" and all references to "OAM" have been changed to "OAQ."

Change 2:

There is no Monitoring Data Availability condition in Section C; Therefore, Condition C.17 is revised as follows:

C.17 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. The compliance monitoring plan can be either an entirely new document, consist in whole information contained in other documents, or consist of a combination of new information and information contained in other documents. If the compliance monitoring plan incorporates by reference information contained in other documents, the Permittee shall identify as part of the compliance monitoring plan the documents in which the information is found. The elements of the compliance monitoring plan are:

- (1) This condition;
- (2) The Compliance Determination Requirements in Section D of this permit;
- (3) The Compliance Monitoring Requirements in Section D of this permit;
- (4) The Record Keeping and Reporting Requirements in Section C (~~Monitoring Data Availability~~, General Record Keeping Requirements and General Reporting Requirements) and in Section D of this permit; and
- (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised

of:

- (A) Reasonable response steps that may be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
 - (B) A time schedule for taking reasonable response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to take reasonable response steps shall constitute a violation of the permit.
- (c) Upon investigation of a compliance monitoring excursion, the Permittee is excused from taking further response steps for any of the following reasons:
- (1) A false reading occurs due to the malfunction of the monitoring equipment. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
 - (3) An automatic measurement was taken when the process was not operating; or
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (e) All monitoring required in Section D shall be performed at all times the equipment is operating. If monitoring is required by Section D and the equipment is not operating, then the Permittee may record the fact that the equipment is not operating or perform the required monitoring.
- (f) If for reasons beyond its control, the Permittee fails to perform the monitoring and record keeping as required by Section D, then the reasons for this must be recorded.
- (1) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent of the operating time in any quarter.
 - (2) Temporary, unscheduled unavailability of qualified staff shall be considered a valid reason for failure to perform the monitoring or record keeping requirements in Section D.

Change 3:

B.8 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit, ~~except those specifically designated as not federally enforceable~~, constitutes a violation of the Clean Air Act and is grounds for:
- (1) Enforcement action;
 - (2) Permit termination, revocation and reissuance, or modification; or
 - (3) Denial of a permit renewal application.
- (b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (c) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in condition B, Emergency Provisions.

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a Part 70 Operating Permit

Source Background and Description

Source Name:	Unifrax Corporation, New Carlisle Facility
Source Location:	54401 Smilax Road, New Carlisle, Indiana 46552
County:	St. Joseph
SIC Code:	3299
Operation Permit No.:	T 141-7925-00029
Permit Reviewer:	CarrieAnn Ortolani

The Office of Air Management (OAM) has reviewed a Part 70 permit application from Unifrax Corporation, New Carlisle Facility relating to the operation of a high-heat insulating materials manufacturing source.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) One (1) Raw Material Handling System consisting of:
 - (1) One (1) No. 4 Sand Silo, equipped with a baghouse identified as No. 4 Sand Silo Baghouse, constructed in 1978, capacity: 0.89 tons per hour.
 - (2) One (1) No. 3 Alumina Silo, equipped with a baghouse identified as No. 3 Alumina Silo Baghouse, constructed in 1978, capacity: 0.89 tons per hour.
 - (3) One (1) No. 1 Kaolin Silo, equipped with a baghouse identified as No. 1 Kaolin Silo Baghouse, constructed in 1978, capacity: 0.89 tons per hour.
 - (4) One (1) No. 2 Kaolin Silo, equipped with a baghouse identified as No. 2 Kaolin Silo Baghouse, constructed in 1978, capacity: 0.89 tons per hour.
 - (5) One (1) No. 5 Zircon Silo, equipped with a baghouse identified as No. 5 Zircon Silo Baghouse, constructed in 1985, capacity: 0.89 tons per hour.
 - (6) One (1) No. 6 H.G. Alumina Silo, equipped with a baghouse identified as No. 6 H.G. Alumina Silo Baghouse, constructed in 1986, capacity: 0.89 tons per hour.
 - (7) One (1) Alumina Transporter, equipped with a baghouse identified as Alumina Transporter Venting Baghouse, constructed in 1978, capacity: 0.89 tons per hour.
 - (8) One (1) No. 1 Day Bin Kaolin, equipped with a baghouse identified as No. 1 Day Bin Kaolin Bin Venting Baghouse, constructed in 1988, capacity: 0.89 tons per hour.

- (9) One (1) No. 2 Day Bin Alumina, equipped with a baghouse identified as No. 2 Day Bin Alumina Bin Venting Baghouse, constructed in 1988, capacity: 0.89 tons per hour.
- (10) One (1) No. 3 Day Bin Sand, equipped with a baghouse identified as No. 3 Day Bin Sand Bin Venting Baghouse, constructed in 1988, capacity: 0.89 tons per hour.
- (b) One (1) Tilt Furnace Process consisting of:
 - (1) One (1) Tilt Furnace Mix Feed Bin 1, equipped with a baghouse identified as Tilt Furnace Mix Feed Bins 1 & 2 Baghouse, constructed in 1985, capacity: 0.925 tons per hour.
 - (2) One (1) Tilt Furnace Mix Feed Bin 2, equipped with a baghouse identified as Tilt Furnace Mix Feed Bins 1 & 2 Baghouse, constructed in 1985, capacity: 0.925 tons per hour.
 - (3) One (1) Tilt Furnace Mix Feed Bin 3, equipped with a baghouse identified as Tilt Furnace Mix Feed Bin 3 Baghouse, constructed in 1985, capacity: 0.925 tons per hour.
 - (4) One (1) Tilt Furnace, equipped with a baghouse identified as Tilt Fume Collector Baghouse, constructed in 1986, capacity: 0.925 tons per hour.
 - (5) One (1) Tilt Furnace Cyclone, equipped with a baghouse identified as Tilt Furnace HSA Baghouse, constructed in 1985, capacity: 0.925 tons per hour.
 - (6) One (1) Tilt Furnace Bulk Bagger, equipped with a baghouse identified as Tilt Furnace HSA Baghouse, constructed in 1985, capacity: 0.925 tons per hour.
 - (7) One (1) Tilt Furnace Attrition Mill, equipped with a baghouse identified as Tilt Furnace HSA Baghouse, constructed in 1985, capacity: 0.925 tons per hour.
- (c) One (1) Submerged Electric Furnace I (SEF I) Process consisting of:
 - (1) One (1) SEF I Mix Feed Bin, equipped with a baghouse identified as SEF I Mix Feed Bin Venting Baghouse, constructed in 1988, capacity: 0.675 tons per hour.
 - (2) One (1) SEF I Furnace, equipped with a baghouse identified as SEF I Furnace Baghouse, constructed in 1986, capacity: 0.675 tons per hour.
 - (3) One (1) SEF I Collector, equipped with a baghouse identified as SEF I Collector Baghouse, constructed in 1991, capacity: 0.675 tons per hour.
 - (4) One (1) SEF I Bulk Bagger, equipped with a baghouse identified as SEF I Downline Baghouse, constructed in 1985, capacity: 0.675 tons per hour.
- (d) One (1) Submerged Electric Furnace II (SEF II) Process consisting of:
 - (1) One (1) SEF II Mix Feed Bin 1, equipped with a baghouse identified as SEF II Mix Feed Bin 1 Bin Venting Baghouse, constructed in 1988, capacity: 1.4 tons per hour.

- (2) One (1) SEF II Mix Feed Bin 2, equipped with a baghouse identified as SEF II Mix Feed Bin 2 Bin Venting Baghouse, constructed in 1988, capacity: 1.4 tons per hour.
- (3) One (1) SEF II Furnace, equipped with a baghouse identified as SEF II Furnace Baghouse, constructed in 1988, capacity: 1.4 tons per hour.
- (4) One (1) SEF II Packaging Equipment, equipped with a baghouse identified as SEF II Downline Baghouse, constructed between 1988 and 1990, capacity: 1.4 tons per hour.
- (5) One (1) SEF II Cyclone, equipped with a baghouse identified as SEF II Cyclone Baghouse, constructed in 1996, capacity: 1.4 tons per hour.
- (6) One (1) SEF II Collector, equipped with a baghouse identified as SEF II Collector Baghouse, constructed in 1996, capacity: 1.4 tons per hour.
- (e) One (1) Submerged Electric Furnace III (SEF III) Process consisting of:
 - (1) One (1) SEF III Mix Feed Bin 1, equipped with a baghouse identified as SEF III Mix Feed Bin 1 Bin Venting Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (2) One (1) SEF III Mix Feed Bin 2, equipped with a baghouse identified as SEF III Mix Feed Bin 2 Bin Venting Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (3) One (1) SEF III Slag Reclaim Bin, equipped with a baghouse identified as SEF III Slag Reclaim Bin Venting Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (4) One (1) SEF III Furnace, equipped with a baghouse identified as SEF III Furnace Baghouse, constructed in 1986, capacity: 1.4 tons per hour.
 - (5) One (1) SEF III Collector, equipped with a baghouse identified as SEF III Collector Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (6) One (1) SEF III Needler, equipped with a baghouse identified as SEF III Downline Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (7) One (1) SEF III Wet Slitter, equipped with a baghouse identified as SEF III Downline Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (8) One (1) SEF III Roll-up Machine, equipped with a baghouse identified as SEF III Downline Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (9) One (1) SEF III Guillotine, equipped with a baghouse identified as SEF III Downline Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
 - (10) One (1) SEF III Attrition Mill, equipped with a baghouse identified as SEF III Downline Baghouse, constructed in 1985, capacity: 1.4 tons per hour.
- (f) One (1) Submerged Electric Furnace IV (SEF IV) Process consisting of:
 - (1) One (1) SEF IV Mix Feed Bin 1, equipped with a baghouse identified as SEF IV Mix

- Feed Bin 1 Bin Venting Baghouse, constructed in 1997, capacity: 0.95 tons per hour.
- (2) One (1) SEF IV Mix Feed Bin 2, equipped with a baghouse identified as SEF IV Mix Feed Bin 2 Bin Venting Baghouse, constructed in 1997, capacity: 0.95 tons per hour.
 - (3) One (1) SEF IV Furnace, equipped with a baghouse identified as SEF IV Furnace Baghouse, constructed in 1997, capacity: 0.95 tons per hour.
 - (4) One (1) SEF IV Attrition Mill, equipped with a baghouse identified as SEF IV Downline Baghouse, constructed in 1997, capacity: 0.95 tons per hour.
 - (5) One (1) SEF IV Cyclone & Bulk Bagger, equipped with a baghouse identified as SEF IV Downline Baghouse, constructed in 1997, capacity: 0.95 tons per hour.
- (g) One (1) Vacuum Casting Process consisting of:
- (1) One (1) Vacuum Cast Mix Tank 1, equipped with a baghouse identified as Vacuum Cast Mix Tanks Baghouse, constructed in 1982, capacity: 1 ton per hour.
 - (2) One (1) Vacuum Cast Mix Tank 2, equipped with a baghouse identified as Vacuum Cast Mix Tanks Baghouse, constructed in 1982, capacity: 1 ton per hour.
 - (3) One (1) Vacuum Cast Board Sander, equipped with a baghouse identified as Vacuum Cast Board Sander Baghouse, constructed in 1978, capacity: 1 ton per hour.
 - (4) One (1) Vacuum Cast Board Saw System, equipped with a baghouse identified as Vacuum Cast Board Saw System Baghouse, constructed in 1996, capacity: 1 ton per hour.
- (h) One (1) Fabricated Products Area consisting of:
- (1) One (1) Fabricated Products Area consisting of folding, banding, and module-making machines, equipped with a baghouse identified as Fabricated Products Area Equipment Baghouse 1, constructed in 1981, capacity: 2 tons per hour.
 - (2) One (1) Fabricated Products Area consisting of a v-blender, ball mill, and high-temperature caulk fabrication, equipped with a baghouse identified as Fabricated Products Area Equipment Baghouse 2, constructed in 1981, capacity: 2 tons per hour.
 - (3) One (1) Fabrication Area Vacuum System, equipped with a baghouse identified as Fabrication Area Vacuum System Baghouse, constructed in 1981, capacity: 1 ton per hour.
- (i) One (1) Warehouse Blow-off Booth with particulate emissions controlled by a Warehouse Blow-off Booth filter, constructed in 1981, capacity: 1 ton per hour.
- (j) One (1) ODB Bagger, equipped with a baghouse identified as ODB Baghouse, constructed in 1981, capacity: 0.25 tons per hour.

Unpermitted Emission Units and Pollution Control Equipment

The source also consists of the following unpermitted facilities/units:

(k) The following facilities at the Raw Material Handling System:

- (1) One (1) Common Blender Transporter, constructed in 1990, equipped with a baghouse identified as Common Blender Transporter Venting Baghouse, capacity: 0.89 tons per hour.
- (2) One (1) No. 4 Day Bin H.G. Alumina, constructed in 1990, equipped with a baghouse identified as No. 4 Day Bin H.G. Alumina Bin Venting Baghouse, capacity: 0.89 tons per hour.
- (3) One (1) No. 5 Day Bin Zircon, constructed in 1990, equipped with a baghouse identified as No. 5 Day Bin Zircon Bin Venting Baghouse, capacity: 0.89 tons per hour.
- (4) One (1) No. 6 Day Bin Test Material, constructed in 1990, equipped with a baghouse identified as No. 6 Day Bin Test Material Bin Venting Baghouse, capacity: 0.89 tons per hour.
- (5) One (1) Bad Batch Bin, constructed in 1990, equipped with a baghouse identified as Bad Batch Bin Bin Venting Baghouse, capacity: 0.89 tons per hour.
- (6) One (1) SEF I, SEF IV, Tilt Blender Transporter, constructed in 1997, equipped with a baghouse identified as SEF I, SEF IV, Tilt Blender Transporter Baghouse, capacity: 0.89 tons per hour.
- (7) One (1) SEF II, SEF III Blender Transporter, constructed in 1997, equipped with a baghouse identified as SEF II, SEF III Blender Transporter Baghouse, capacity: 0.89 tons per hour.

(l) The following facility at the Tilt Furnace Process:

One (1) Tilt Furnace Conveyor, constructed in 1994, equipped with a baghouse identified as Tilt Furnace HSA Baghouse, capacity: 0.925 tons per hour.

(m) The following facilities at the Submerged Electric Furnace I (SEF I) Process:

- (1) One (1) SEF I Conveyor System, constructed in 1988, equipped with a baghouse identified as SEF I Downline Baghouse, capacity: 0.675 tons per hour.
- (2) One (1) SEF I Attrition Mill, constructed in 1988, equipped with a baghouse identified as SEF I Downline Baghouse, capacity: 0.675 tons per hour.
- (3) One (1) SEF I Picker, constructed in 1988, equipped with a baghouse identified as SEF I Downline Baghouse, capacity: 0.675 tons per hour.

(n) The following facility at the Submerged Electric Furnace II (SEF II) Process:

One (1) SEF II Attrition Mill, constructed in 1997, equipped with a baghouse identified as SEF II Downline Baghouse, capacity: 1.4 tons per hour.

- (o) The following facilities at the Submerged Electric Furnace III (SEF III) Process:
 - (1) One (1) SEF III Conveyor System, constructed in 1985, equipped with a baghouse identified as SEF III Downline Baghouse, capacity: 1.4 tons per hour.
 - (2) One (1) SEF III Bulk Bagger, constructed in 1985, equipped with a baghouse identified as SEF III Downline Baghouse, capacity: 1.4 tons per hour.
- (p) The following facilities at the Fabricated Products Area:
 - (1) One (1) Fabricated Products Area Band Saw System, constructed in 1981, equipped with a baghouse identified as Fabricated Products Area Band Saw System Baghouse, capacity: 1 ton per hour.
 - (2) One (1) Fabrication Area Blow-off booth, constructed in 1986, equipped with a filter identified as Fabrication area Blow-off Booth Filter, capacity: 1 ton per hour.

New Emission Units and Pollution Control Equipment Receiving Advanced Source Modification Approval

There are no new facilities proposed at this source during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:
 - (1) One (1) Tilt Furnace Boiler, capacity: 7 million British thermal units per hour.
 - (2) One (1) SEF III Gas Oven, equipped with a baghouse identified as SEF III Downline Baghouse, capacity: 1.4 tons per hour and 2.4 million British thermal units per hour.
 - (3) One (1) Vacuum Cast Cure Oven, capacity: 2.0 million British thermal units per hour.
- (b) Quality Assurance Lab with two (2) exhaust hoods of 1,000 cubic feet per minute, each.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) CP 141-2522-00029, issued on January 18, 1995; and
- (b) CP 141-6517-00029, issued on December 20, 1996.

All conditions from previous approvals were incorporated into this Part 70 permit except the following:

- (a) CP 141-2522-00029, issued on January 18, 1995

Operation Condition 5(h)(1): The PM emissions from the baghouses are limited as follows:

For the General Facilities: Point Id #40, 0.025 gr/dscf with an input flow rate not to exceed 2,500 dscfm;

Reason not incorporated: The facility no longer exists.

- (b) CP 141-2522-00029, issued on January 18, 1995

Operation Condition 5(a)(6): The PM emissions from the baghouses are limited as follows:

For the Raw Material Storage and Handling Process: Point Id #6 (now referred to as No. 1 Day Bin Kaolin Bin Venting Baghouse), 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm;

Reason not incorporated: The source has requested that the limit for the No. 1 Day Bin Kaolin Bin Venting Baghouse be changed to 0.025 gr/dscf with an input flow rate not to exceed 900 dscfm. This limit was required to make the source a minor source pursuant to 326 IAC 2-3, Emission Offset, and keep the facility in compliance with 326 IAC 6-1. With the revised limit, the source will still comply with 326 IAC 6-1. Since the source was limited to a PM and PM₁₀ emission rate of less than 86.0 tons per year and this change results in an increase in the emission rate of only 0.086 pounds per hour and 0.376 tons per year, the existing source in 1995 was still a minor source pursuant to 326 IAC 2-3, Emission Offset. Therefore, the requested revised limit will appear in the permit. The No. 2 Day Bin Alumina Bin Venting Baghouse and the No. 3 Day Bin Sand Bin Venting Baghouse were given a limit of 0.025 gr/dscf with an input flow rate not to exceed 900 dscfm in that permit.

- (c) CP 141-2522-00029, issued on January 18, 1995

Operation Condition 5(e)(5): The PM emissions from the baghouses are limited as follows:

For the Spun Furnace Process: Point Id #28 (now referred to as SEF III Slag Reclaim Bin Venting Baghouse), 0.025 gr/dscf with an input flow rate not to exceed 200 dscfm;

Reason not incorporated: The source has requested that the limit for the SEF III Slag Reclaim Bin Venting Baghouse be changed to 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm. This limit was required to make the source a minor source pursuant to 326 IAC 2-3, Emission Offset, and keep the facility in compliance with 326 IAC 6-1. With the revised limit, the source will still comply with 326 IAC 6-1. Since the source was limited to a PM and PM₁₀ emission rate of less than 86.0 tons per year and this change results in an increase in the emission rate of only 0.064 pounds per hour and 0.281 tons per year, the existing source in 1995 was still a minor source pursuant to 326 IAC 2-3, Emission Offset. Therefore, the requested revised limit will appear in the permit.

- (d) CP 141-6517-00029, issued on December 20, 1996

Operation Condition 11: That pursuant to 326 IAC 6-3 (Process Operations), particulate matter from the SEF II line shall be limited to:

- (1) 0.028 lbs/hr from each of the mix feed bin baghouses (19A and 19B),
- (2) 1.12 lbs/hr from the fume hood baghouse (20),

- (3) 0.705 lbs/hr from the cyclone baghouse (21),
- (4) 1.24 lbs/hr from the downline equipment baghouse (22), and
- (5) 2.25 lbs/hr from the fiber collector baghouse (45).

Reason not incorporated: The facilities listed above will be limited by 326 IAC 6-1 (Non-attainment Area Particulate Limitations) as stated in the section of this document entitled "State Rule Applicability - Individual Facilities." The requirements of 326 IAC 6-3-2 do not apply.

- (e) CP 141-6517-00029, issued on December 20, 1996

Operation Condition 12: That pursuant to 326 IAC 6-3 (Process Operations), particulate matter from the SEF IV line shall be limited to:

- (1) 0.054 lbs/hr from each of the mix feed bin baghouses (48 and 49),
- (2) 2.15 lbs/hr from the fume hood baghouse (46), and
- (3) 2.37 lbs/hr from the cyclone baghouse (47).

Reason not incorporated: The facilities listed above will be limited by 326 IAC 6-1 (Non-attainment Area Particulate Limitations) as stated in the section of this document entitled "State Rule Applicability - Individual Facilities." The requirements of 326 IAC 6-3-2 do not apply.

- (f) CP 141-2522-00029, issued on January 18, 1995

Operation Conditions 5(b)(3), (b)(4), (c)(2), (c)(3), (c)(4), (d)(3), (d)(4), (d)(5), (e)(3), (e)(6) and (g)(1): The PM emissions from the baghouses are limited as follows:

- (b)(3) Point ID# 12 (now referred to as Tilt Fume Collector Baghouse), 0.025 gr/dscf with an input flow rate not to exceed 30,000 dscfm;
- (b)(4) Point ID# 13 (now referred to as Tilt Furnace HSA Baghouse), 0.025 gr/dscf with an input flow rate not to exceed 36,000 dscfm;
- (c)(2) Point ID#15 (now referred to as SEF I Furnace Baghouse), 0.025 gr/dscf with an input flow rate not to exceed 15,000 dscfm;
- (c)(3) Point ID# 16 (now referred to as SEF I Collector Baghouse), 0.025 gr/dscf with an input flow rate not to exceed 24,000 dscfm;
- (c)(4) Point ID# 17 (now referred to as SEF I Downline Baghouse), 0.025 gr/dscf with an input flow rate not to exceed 18,000 dscfm;
- (d)(3) Point ID# 20 (now referred to as SEF II Furnace Baghouse), 0.025 gr/dscf with an input flow rate not to exceed 20,000 dscfm;
- (d)(4) Point ID #21 (now referred to as SEF II Downline Baghouse), 0.025 gr/dscf with an

input flow rate not to exceed 18,000 dscfm;

- (d)(5) Point ID #22 (now referred to as SEF II Cyclone Baghouse), 0.025 gr/dscf with an input flow rate not to exceed 30,000 dscfm;
- (e)(3) Point ID #25 (now referred to as SEF III Furnace Baghouse), 0.025 gr/dscf with an input flow rate not to exceed 20,000 dscfm;
- (e)(6) Point ID #29 (now referred to as SEF III Collector Baghouse), 0.025 gr/dscf with an input flow rate not to exceed 39,000 dscfm; and
- (g)(1) Point ID# 35 (now referred to as Fabricated Products Area Band Saw System Baghouse), 0.025 gr/dscf with an input flow rate not to exceed 9,000 dscfm.

Reason not incorporated: These limits did not ensure that the source would be a minor source pursuant to 326 IAC 2-3, Emission Offset, as they were intended to do. The source, however, had actual emission less than 100 tons per year. In compliance stack tests in 1995, the source showed that the outlet grain loading or flow rate at these stacks are much lower than the permit limit. Therefore, the grain loading is further limited in this permit to show that the source was, in fact, a minor source pursuant to 326 IAC 2-3, Emission Offset. The source is now a major source pursuant to 326 IAC 2-2, Prevention of Significant Deterioration, due to a modification in 1996 and 1997. This source will continue to comply with these limits as a result of complying with the limits stated in the section of this document entitled "State Rule Applicability - Entire Source."

Enforcement Issue

- (a) IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled *Unpermitted Emission Units and Pollution Control Equipment*.
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

Recommendation

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 permit application for the purposes of this review was received on December 18, 1996. Additional information was received on August 4, 2000.

A notice of completeness letter was mailed to the source on March 3, 1997.

Emission Calculations

See pages 1 through 9 of 9 of Appendix A of this document for detailed emissions calculations.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	15,593
PM ₁₀	15,593
SO ₂	0.937
VOC	0.00
CO	1.17
NO _x	6.33

Note: For the purpose of determining Title V applicability for particulates, PM₁₀, not PM, is the regulated pollutant in consideration.

HAPs	Potential To Emit (tons/year)
Individual	less than 10
TOTAL	less than 25

The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM₁₀ is equal to or greater than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1990 OAM emission data.

Pollutant	Actual Emissions (tons/year)
PM	57.7
PM ₁₀	41.9
SO ₂	0.010
VOC	1.22

CO	0.320
NO _x	1.60
HAPs	not reported

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 Operating Permit.

	Potential to Emit (tons/year)						
Process/facility	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
No.4 Sand Silo	0.469	0.469	0.00	0.00	0.00	0.00	0.00
No.3 Alumina Silo	0.469	0.469	0.00	0.00	0.00	0.00	0.00
No.1 Kaolin Silo	0.469	0.469	0.00	0.00	0.00	0.00	0.00
No.2 Kaolin Silo	0.469	0.469	0.00	0.00	0.00	0.00	0.00
No. 5 Zircon Silo	0.469	0.469	0.00	0.00	0.00	0.00	0.00
No.6 H.G. Alumina Silo	0.469	0.469	0.00	0.00	0.00	0.00	0.00
Alumina Transporter	0.469	0.469	0.00	0.00	0.00	0.00	0.00
Common Blender Transporter	0.469	0.469	0.00	0.00	0.00	0.00	0.00
No.1 Day Bin Kaolin	0.845	0.845	0.00	0.00	0.00	0.00	0.00
No.2 Day Bin Alumina	0.845	0.845	0.00	0.00	0.00	0.00	0.00
No.3 Day Bin Sand	0.845	0.845	0.00	0.00	0.00	0.00	0.00
No.4 Day Bin H.G. Alumina	0.469	0.469	0.00	0.00	0.00	0.00	0.00
No.5 Day Bin Zircon	0.469	0.469	0.00	0.00	0.00	0.00	0.00
No.6 Day Bin Test Material	0.469	0.469	0.00	0.00	0.00	0.00	0.00
Bad Batch Bin	0.469	0.469	0.00	0.00	0.00	0.00	0.00
SEF I, SEF IV Tilt Blender Transporter	0.563	0.563	0.00	0.00	0.00	0.00	0.00

	Potential to Emit (tons/year)						
Process/facility	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
SEF II, SEF III Tilt Blender Transporter	0.563	0.563	0.00	0.00	0.00	0.00	0.00
Tilt Furnace Mix Feed Bins 1 and 2	0.469	0.469	0.00	0.00	0.00	0.00	0.00
Tilt Furnace Mix Feed Bin 3	0.469	0.469	0.00	0.00	0.00	0.00	0.00
Tilt Furnace	2.82	2.82	0.162	0.00	0.203	1.09	0.00
Tilt Furnace Cyclone, Bulk Bagger, Attrition Mill, and Conveyor	3.38	3.38	0.00	0.00	0.00	0.00	0.00
SEF I Mix Feed Bin	0.469	0.469	0.00	0.00	0.00	0.00	0.00
SEF I Furnace	1.41	1.41	0.118	0.00	0.148	0.798	0.00
SEF I Collector	2.25	2.25	0.00	0.00	0.00	0.00	0.00
SEF I Bulk Bagger, Conveyor, System Attrition Mill, and Picker	3.65	3.65	0.00	0.00	0.00	0.00	0.00
SEF II Mix Feed Bin 1	0.469	0.469	0.00	0.00	0.00	0.00	0.00
SEF II Mix Feed Bin 2	0.469	0.469	0.00	0.00	0.00	0.00	0.00
SEF II Furnace	1.64	1.64	0.245	0.00	0.307	1.66	0.00
SEF II Packaging Equipment and Attrition Mill	0.899	0.899	0.00	0.00	0.00	0.00	0.00
SEF II Cyclone	1.25	1.25	0.00	0.00	0.00	0.00	0.00
SEF II Collector	45.1	45.1	0.00	0.00	0.00	0.00	0.00
SEF III Mix Feed Bin 1	0.469	0.469	0.00	0.00	0.00	0.00	0.00
SEF III Mix Feed Bin 2	0.469	0.469	0.00	0.00	0.00	0.00	0.00
SEF III Slag Reclaim Bin	0.469	0.469	0.00	0.00	0.00	0.00	0.00

	Potential to Emit (tons/year)						
Process/facility	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
SEF III Furnace	1.88	1.88	0.245	0.00	0.307	1.66	0.00
SEF III Collector	0.966	0.966	0.00	0.00	0.00	0.00	0.00
SEF III Needler, Wet Slitter, Roll-up Machine, Guillotine, Gas Oven (PM only), Conveyor System, Attrition Mill, and Bulk Bagger	16.9	16.9	0.00	0.00	0.00	0.00	0.00
ODB Bagger and Opener	5.63	5.63	0.00	0.00	0.00	0.00	0.00
SEF IV Mix Feed Bin 1	0.563	0.563	0.00	0.00	0.00	0.00	0.00
SEF IV Mix Feed Bin 2	0.563	0.563	0.00	0.00	0.00	0.00	0.00
SEF IV Furnace	22.5	22.5	0.166	0.00	0.208	1.12	0.00
SEF IV Attrition Mill, Cyclone, and Bulk Bagger	24.8	24.8	0.00	0.00	0.00	0.00	0.00
Vacuum Cast Mix Tanks 1 and 2	3.21	3.21	0.00	0.00	0.00	0.00	0.00
Vacuum Cast Board Sander	6.43	6.43	0.00	0.00	0.00	0.00	0.00
Vacuum Cast Board Saw System	7.71	7.71	0.00	0.00	0.00	0.00	0.00
Fabricated Products Area, consisting of folding, banding, and module- making machines	8.45	8.45	0.00	0.00	0.00	0.00	0.00
Fabricated Products Area, consisting of v- blender, ball mill, high temperature caulk fabrication machines	4.69	4.69	0.00	0.00	0.00	0.00	0.00

	Potential to Emit (tons/year)						
Process/facility	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
Fabricated Products Area Bandsaw System	2.35	2.35	0.00	0.00	0.00	0.00	0.00
Fabrication Area Vacuum System	0.939	0.939	0.00	0.00	0.00	0.00	0.00
Fabrication Area Blow-off Booth	2.82	2.82	0.00	0.00	0.00	0.00	0.00
Warehouse Blow-off Booth	2.82	2.82	0.00	0.00	0.00	0.00	0.00
Insignificant Activities	1.00	1.00	1.00	1.00	5.00	5.00	negligible
Total Emissions	190	190	1.94	1.00	6.17	11.3	negligible

This source is a major source pursuant to 326 IAC 2-2, Prevention of Significant Deterioration, because it is in one (1) of the twenty-eight (28) listed source categories and has the potential to emit one-hundred (100) tons per year or more of PM and PM₁₀.

County Attainment Status

The source is located in St. Joseph County.

Pollutant	Status
PM ₁₀	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. St. Joseph County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) St. Joseph County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions

This type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2, but there are no applicable New Source Performance Standards that were in effect on August 7, 1980. Therefore, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

- (a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.
- (b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Federal Rule Applicability

- (a) This Part 70 does not involve a pollutant-specific emissions unit with the potential to emit after control in an amount equal to or greater than one hundred (100) tons per year. Therefore, the requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not applicable.
- (b) The one (1) insignificant boiler is not subject to the requirements of the New Source Performance Standards, 326 IAC 12, (40 CFR Part 60.40, 60.40a, 60.40b and 60.40c), Subparts D, Da, Db and Dc, because the capacity of the boiler is 7 million British thermal units per hour, which is less than 10 million British thermal units per hour.
- (c) This fiberglass insulation manufacturing source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.290), Subpart CC, because all furnaces are electric. Pursuant to 40 CFR 60.290(c), the subpart does not apply to all-electric melters.
- (d) This fiberglass insulation manufacturing source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.600), Subpart HHH, because this is not a solvent spun synthetic fiber process.
- (e) This fiberglass insulation manufacturing source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.680), Subpart PPP, because it does not have a rotary spun wool fiberglass insulation manufacturing line.
- (f) This fiberglass insulation manufacturing source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.670), Subpart OOO, because the sand and kaolin is not grinded and crushed. All grinding and crushing is done after processing in the melting furnaces.
- (g) This fiberglass insulation manufacturing source is not subject to the requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP), 326 IAC 14, (40 CFR Part 63.1177), Subpart DDD, because this plant is not a major source of hazardous air pollutants (HAPs).

- (h) There are no National Emission Standard for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20, and 40 CFR Parts 61 and 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-3 (Emission Offset)

At the time this source was constructed, the source was in a nonattainment area for PM. However, the PSD and Emission Offset threshold for this source, which is one of the twenty-eight (28) listed source categories, is 100 tons per year. Pursuant to CP 141-2522-00029, issued on January 18, 1995, this source was limited to be a minor source under 326 IAC 2-3, Emission Offset. However, the limitations in the permit did not correctly represent the limited potential to emit of the source, and the limits did not ensure that the source was a minor source pursuant to 326 IAC 2-3, Emission Offset. The source, however, did have actual emissions less than 100 tons per year of each criteria pollutant. This source became a major source as a result of a minor modification to an existing minor source, which was permitted in 1996. This area of St. Joseph County has been re-designated attainment for all criteria pollutants. This source is now a major source pursuant to 326 IAC 2-2, Prevention of Significant Deterioration (PSD). Because this source became major as a result of a minor modification to an existing major source, no PSD or Emission Offset permit was required. Pages 5 and 6 of 9 of the TSD Appendix A illustrate how the source was a minor source and is currently a major source pursuant to 326 IAC 2-2, PSD. The source will comply with the limitations applicable to each facility. These limitations are as follows:

- (a) Pursuant to CP 141-2522-00029, issued on January 18, 1995, the PM emissions from the baghouses covered in that permit (listed below) are limited to make the initial source a minor source pursuant to 326 IAC 2-3, Emission Offset, and to comply with 326 IAC 6-1:
- (1) For the Raw Material Storage and Handling Process: The No. 4 Sand Silo Baghouse, No. 3 Alumina Silo Baghouse, No. 1 Kaolin Silo Baghouse, No. 2 Kaolin Silo Baghouse, No. 5 Zircon Silo Baghouse, No. 6 H.G. Alumina Silo Baghouse, and the Alumina Transporter Venting Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm, each; and the No. 2 Day Bin Alumina Bin Venting Baghouse and the No. 3 Day Bin Sand Bin Venting Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 900 dscfm, each.
 - (2) For the Tilt Furnace Process: The Tilt Furnace Mix Feed Bins 1 and 2 Baghouse and the Tilt Furnace Mix Feed Bin 3 Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm, each.
 - (3) For the SEF I Furnace Process: SEF I Mix Feed Bin Venting Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm.
 - (4) For the SEF II Furnace Process: SEF II Mix Feed Bin 1 Bin Venting Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm; and SEF II Mix Feed Bin 2 Bin Venting Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm.
 - (5) For the Spun Furnace Process: SEF III Mix Feed Bin 1 Bin Venting Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm; SEF III Mix Feed Bin 2 Bin Venting Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm; and SEF III Downline Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 18,000 dscfm.

- (6) For the Vacuum Casting Process: Vacuum Cast Board Sander Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 15,000 dscfm; Vacuum Cast Board Saw System Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 18,000 dscfm; and Vacuum Cast Mix Tanks 1 and 2 Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 7,500 dscfm. In addition, each facility at the vacuum casting process shall be limited to 4,000 hours of operation per consecutive twelve (12) month period.
 - (7) For the Fabricated Products Process: Fabricated Products Area Fabrication Equipment Baghouse 1, 0.025 gr/dscf with an input flow rate not to exceed 9,000 dscfm; Fabricated Products Area Fabrication Equipment Baghouse 2, 0.025 gr/dscf with an input flow rate not to exceed 5,000 dscfm; and Fabrication Area Vacuum System Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 1,000 dscfm.
 - (8) For the General Facilities: ODB Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 6,000 dscfm.
 - (9) The limit for the No. 1 Day Bin Kaolin Bin Venting Baghouse was 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm. The source has requested that the limit be changed to 0.025 gr/dscf with an input flow rate not to exceed 900 dscfm. Since this change results in an increase in the emission rate of only 0.086 pounds per hour and 0.376 tons per year, the requested revised limit will appear in the permit.
 - (10) The limit for the SEF III Slag Reclaim Bin Venting Baghouse was 0.025 gr/dscf with an input flow rate not to exceed 200 dscfm. The source has requested that the limit be changed to 0.025 gr/dscf with an input flow rate not to exceed 500 dscfm. Since this change results in an increase in the emission rate of only 0.064 pounds per hour and 0.281 tons per year, the requested revised limit will appear in the permit.
- (b) In order to show that the existing source was a minor source in 1995 pursuant to 326 IAC 2-3, Emission Offset, the following emission units are limited. The following limits will also ensure compliance with 326 IAC 6-1:
- (1) Tilt Fume Collector Baghouse, 0.0025 gr/dscf with an input flow rate not to exceed 30,000 dscfm;
 - (2) Tilt Furnace HSA Baghouse, 0.0025 gr/dscf with an input flow rate not to exceed 36,000 dscfm;
 - (3) SEF I Furnace Baghouse, 0.0025 gr/dscf with an input flow rate not to exceed 15,000 dscfm;
 - (4) SEF I Collector Baghouse, 0.0025 gr/dscf with an input flow rate not to exceed 24,000 dscfm;
 - (5) SEF I Downline Baghouse, 0.0054 gr/dscf with an input flow rate not to exceed 18,000 dscfm;
 - (6) SEF II Furnace Baghouse, 0.00218 gr/dscf with an input flow rate not to exceed 20,000 dscfm;
 - (7) SEF II Downline Baghouse, 0.00133 gr/dscf with an input flow rate not to exceed 18,000 dscfm;

- (8) SEF II Cyclone Baghouse, 0.00111 gr/dscf with an input flow rate not to exceed 30,000 dscfm;
 - (9) SEF III Furnace Baghouse, 0.0025 gr/dscf with an input flow rate not to exceed 20,000 dscfm;
 - (10) SEF III Collector Baghouse, 0.000626 gr/dscf with an input flow rate not to exceed 39,000 dscfm; and
 - (11) Fabricated Products Area Band Saw System Baghouse, 0.025 gr/dscf with an input flow rate not to exceed 2,500 dscfm.
- (c) The facilities existing in 1995, but not permitted in CP 141-2522-00029, will be required to comply with the following limitations:
- (1) The Common Blender Transporter, 0.025 gr/dscf with an input flow rate of 500 dscfm;
 - (2) The No.4 Day Bin H.G. Alumina, 0.025 gr/dscf with an input flow rate of 500 dscfm;
 - (3) The No.5 Day Bin Zircon, 0.025 gr/dscf with an input flow rate of 500 dscfm;
 - (4) The No.6 Day Bin Test Material, 0.025 gr/dscf with an input flow rate of 500 dscfm;
 - (5) The Bad Batch Bin, 0.025 gr/dscf with an input flow rate of 500 dscfm;
 - (6) The Fabrication Area Blow-off Booth, 0.025 gr/dscf with an input flow rate of 3,000 dscfm; and
 - (7) The Warehouse Blow-off Booth, 0.025 gr/dscf with an input flow rate 3,000 dscfm.
- (d) The facilities constructed during or after 1996 and not permitted in CP 141-2522-00029, will be required to comply with the following limitations:
- (1) The SEF I, SEF IV Tilt Blender Transporter, 0.030 gr/dscf with an input flow rate of 500 dscfm;
 - (2) The SEF II, SEF III Tilt Blender Transporter, 0.030 gr/dscf with an input flow rate of 500 dscfm;
 - (3) The SEF II Collector, 0.030 gr/dscf with an input flow rate of 40,000 dscfm;
 - (4) The SEF IV Mix Feed Bin 1, 0.030 gr/dscf with an input flow rate of 500 dscfm;
 - (5) The SEF IV Mix Feed Bin 2, 0.030 gr/dscf with an input flow rate of 500 dscfm;
 - (6) The SEF IV Furnace, 0.030 gr/dscf with an input flow rate of 20,000 dscfm; and
 - (7) The SEF IV Attrition Mill, Cyclone and Bulk Bagger, all exhausting to the SEF IV Downline baghouse, 0.030 gr/dscf with an input flow rate of 22,000 dscfm.
- (e) According to the information submitted in this application, the source has been, and will continue to, comply with these limitations.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of PM₁₀. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year).

326 IAC 5-1 (Opacity Emissions Limitations)

This source is in St. Joseph County, but it is not in the area north of Kern Road and east of Pine Road. Therefore, this source is subject to the requirement of 326 IAC 5-1-2(1). Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR Part 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-1 (Nonattainment area particulate limitations)

This source is located in St. Joseph County, which is listed in 326 IAC 6-1-7, but the source is not specifically listed in 326 IAC 6-1-18. Since the potential to emit PM from the entire source is greater than 100 tons per year, the requirements of 326 IAC 6-1-2 are applicable.

- (a) Pursuant to 326 IAC 6-1-2(a), each facility at this source shall not allow or permit discharge to the atmosphere of any gases which contain particulate matter in excess of 0.07 gram per dry standard cubic meter (0.03 grain per dry standard cubic foot). According to the information submitted by the applicant, all facilities will comply with this rule. Compliance with the limitations listed under 326 IAC 2-2, above, will ensure compliance with this rule.
- (b) The one (1) insignificant boiler is subject to the requirements of 326 IAC 6-1-2(b)(5). The particulate matter content shall not exceed 0.01 grains per dry standard cubic foot.

326 IAC 6-2-4 (Particulate Emissions from Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-1(d), if this limitation is inconsistent with 326 IAC 6-1-2(b)(5), the limitation in 326 IAC 6-1-2(b)(5) shall prevail. Therefore, since 326 IAC 6-1 applies, the requirements of 326 IAC 6-2-4 are not applicable.

326 IAC 6-3-2 (Process Operations)

Pursuant to 326 IAC 6-3-1(b)(1), if any limitations established by this rule is inconsistent with applicable limitations contained in 326 IAC 6-1, then the limitation contained in this rule shall not apply. Since 326 IAC 6-1 applies, the requirements of 326 IAC 6-3-2 do not apply.

326 IAC 11-4 (Fiberglass Insulation Manufacturing)

The requirements of 326 IAC 11-4, Fiberglass insulation manufacturing, are not applicable because this source is not located in Shelby County.

Testing Requirements

Initial stack tests were required in previous permits. There is no additional stack testing required.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

The facilities at this source have applicable compliance monitoring conditions as specified below:

- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the Fabrication Area Blow-off Booth filter and Warehouse Blow-off Booth filter. To monitor the performance of the dry filters, weekly observations shall be made of the particulate from the blow-off booth stacks while the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit. Monthly inspections shall be performed of the particulate emissions from the stack and the presence of particulate on the rooftops and the nearby ground. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when a noticeable change in particulate emission, or evidence of particulate emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit. Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.
- (b) Visible emission notations of all stack exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously,

"normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

- (c) The Permittee shall record the total static pressure drop across all baghouses used in conjunction with the high-heat insulating materials manufacturing source, at least once per shift when the process exhausting to that baghouse is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 1.0 and 5.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.
- (d) An inspection shall be performed each calendar quarter of all bags controlling the operations at this source when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.
- (e) In the event that bag failure has been observed:
 - (1) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
 - (2) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary because the baghouses and filters for PM control must operate properly to ensure compliance with 326 IAC 6-1 (Nonattainment Area Particulate Limitations) and 326 IAC 2-7 (Part 70).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either

carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Part 70 Application Form GSD-08.

- (a) This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.
- (b) See attached calculations (page 9 of 9 of TSD Appendix A) for detailed air toxic calculations.

Conclusion

The operation of this high-heat insulating materials manufacturing source shall be subject to the conditions of the attached proposed **Part 70 Permit No. T 141-7925-00029**.

**Appendix A: Emission Calculations
Baghouse Operations**

Company Name: Unifrax Corporation, New Carlisle Facility
Address City IN Zip: 54401 Smilax Road, New Carlisle, IN 46552-9751
Part 70: T 141-7925
Plt ID: 141-00029
Reviewer: CarrieAnn Ortolani
Date: December 18, 1996

Unit ID	Control Name	Control Efficiency (%)	Grain Loading per Dry Standard Cubic foot of Outlet Air (grains/dscf)	Gas or Air Flow Rate (dscfm)	PM Emission Rate before Controls (lb/hr)	PM Emission Rate before Controls (tons/yr)	PM Emission Rate after Controls (lb/hr)	PM Emission Rate after Controls (tons/yr)	Raw Material Throughput (tons/hr)
No.4 Sand Silo	No.4 Sand Silo Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	0.89
No.3 Alumina Silo	No.3 Alumina Silo Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	0.89
No.1 Kaolin Silo	No.1 Kaolin Silo Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	0.89
No.2 Kaolin Silo	No.2 Kaolin Silo Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	0.89
No.5 Zircon Silo	No.5 Zircon Silo Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	0.89
No.6 H.G. Alumina Silo	No.6 H.G. Alumina Silo Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	0.89
Alumina Transporter	Alumina Transporter Venting Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	0.89
No.1 Day Bin Kaolin	No.1 Day Bin Kaolin Bin Venting Baghouse	99.0%	0.025	900.0	19.3	84.47	0.193	0.845	0.89
No.2 Day Bin Alumina	No.2 Day Bin Alumina Bin Venting Baghouse	99.0%	0.025	900.0	19.3	84.47	0.193	0.845	0.89
No.3 Day Bin Sand	No.3 Day Bin Sand Bin Venting Baghouse	99.0%	0.025	900.0	19.3	84.47	0.193	0.845	0.89
Tilt Furnace Mix Feed Bins 1 and 2	Tilt Furnace Mix Feed Bins 1 and 2 Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	0.93
Tilt Furnace Mix Feed Bin 3	Tilt Furnace Mix Feed Bin 3 Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	0.93
Tilt Furnace	Tilt Furnace Collector Baghouse	99.0%	0.003	30000.0	64.3	281.57	0.643	2.82	0.93
Tilt Furnace Cyclone, Bulk Bagger, Attrition Mill, Conveyor	Tilt Furnace HSA Baghouse	99.0%	0.003	36000.0	77.1	337.89	0.771	3.38	0.93
SEF I Mix Feed Bin	SEF I Mix Feed Bin Venting Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	0.68
SEF I Furnace	SEF I Furnace Baghouse	99.0%	0.003	15000.0	32.1	140.79	0.321	1.41	0.68
SEF I Collector	SEF I Collector Baghouse	99.0%	0.003	24000.0	51.4	225.26	0.514	2.25	0.68

**Appendix A: Emission Calculations
Baghouse Operations**

Company Name: Unifrax Corporation, New Carlisle Facility
Address City IN Zip: 54401 Smilax Road, New Carlisle, IN 46552-9751
Part 70: T 141-7925
Plt ID: 141-00029
Reviewer: CarrieAnn Ortolani
Date: December 18, 1996

Unit ID	Control Name	Control Efficiency (%)	Grain Loading per Dry Standard Cubic foot of Outlet Air (grains/dscf)	Gas or Air Flow Rate (dscfm)	PM Emission Rate before Controls (lb/hr)	PM Emission Rate before Controls (tons/yr)	PM Emission Rate after Controls (lb/hr)	PM Emission Rate after Controls (tons/yr)	Raw Material Throughput (tons/hr)
SEF I Bulk Bagger, Conveyor System Attrition Mill, Picker	SEF I Downline Baghouse	99.0%	0.005	18000.0	83.3	364.92	0.833	3.65	0.68
SEF II Mix Feed Bin 1	SEF II Mix Feed Bin 1 Bin Venting Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	1.4
SEF II Mix Feed Bin 2	SEF II Mix Feed Bin 2 Bin Venting Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	1.4
SEF II Furnace	SEF II Furnace Baghouse	99.0%	0.002	20000.0	37.4	163.69	0.374	1.64	1.4
SEF II Packaging Equipment and Attrition Mill	SEF II Downline Baghouse	99.0%	0.001	18000.0	20.5	89.88	0.205	0.899	1.4
SEF II Cyclone	SEF II Cyclone Baghouse	99.0%	0.001	30000.0	28.5	125.02	0.285	1.25	1.4
SEF III Mix Feed Bin 1	SEF III Mix Feed Bin 1 Bin Venting Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	1.4
SEF III Mix Feed Bin 2	SEF III Mix Feed Bin 2 Bin Venting Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	1.4
SEF III Slag Reclaim Bin	SEF III Slag Reclaim Bin Bin Venting Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	1.4
SEF III Furnace	SEF III Furnace Baghouse	99.0%	0.003	20000.0	42.9	187.71	0.429	1.88	1.4
SEF III Collector	SEF III Collector Baghouse	99.0%	0.001	39000.0	20.9	91.66	0.209	0.917	1.4
Roll-up Machine, Guillotine, 2.4 MMBtu/hr gas oven, Conveyor System, Attrition Mill, and Bulk Bagger	SEF III Downline Baghouse	99.0%	0.025	18000.0	385.7	1689.43	3.857	16.9	1.4
ODB Bagger and Opener	ODB Baghouse	99.0%	0.025	6000.0	128.6	563.14	1.286	5.63	0.25
Vacuum Cast Mix Tanks 1 and 2	Vacuum Cast Mix Tanks 1 and 2 Baghouse	99.0%	0.025	7500.0	160.7	703.93	1.607	7.04	1.00
Vacuum Cast Board Sander	Vacuum Cast Board Sander Baghouse	99.0%	0.025	15000.0	321.4	1407.86	3.214	14.1	1.00
Vacuum Cast Board Saw System	Vacuum Cast Board Saw System Baghouse	99.0%	0.025	18000.0	385.7	1689.43	3.857	16.9	1.00

**Appendix A: Emission Calculations
Baghouse Operations**

Company Name: Unifrax Corporation, New Carlisle Facility
Address City IN Zip: 54401 Smilax Road, New Carlisle, IN 46552-9751
Part 70: T 141-7925
Plt ID: 141-00029
Reviewer: CarrieAnn Ortolani
Date: December 18, 1996

Unit ID	Control Name	Control Efficiency (%)	Grain Loading per Dry Standard Cubic foot of Outlet Air (grains/dscf)	Gas or Air Flow Rate (dscfm)	PM Emission Rate before Controls (lb/hr)	PM Emission Rate before Controls (tons/yr)	PM Emission Rate after Controls (lb/hr)	PM Emission Rate after Controls (tons/yr)	Raw Material Throughput (tons/hr)
Fabricated Products Area consisting of folding, banding, module-making machines	Fabricated Products Area Fabrication Equipment Baghouse 1	99.0%	0.025	9000.0	192.9	844.71	1.929	8.45	1.00
Fabricated Products Area consisting v-blender, ball-mill, high temp caulk fabrication machines	Fabricated Products Area Fabrication Equipment Baghouse 2	99.0%	0.025	5000.0	107.1	469.29	1.071	4.69	1.00
Fabricated Products Area Bandsaw System	Fabricated Products Area Bandsaw System Baghouse	99.0%	0.025	2500.0	53.6	234.64	0.536	2.35	1.00
Fabrication Area Vacuum System	Fabrication Area Vacuum System Baghouse	99.0%	0.025	1000.0	21.4	93.86	0.214	0.939	1.00
SEF II Collector	SEF II Collector Baghouse	99.0%	0.005	40000.0	185.1	810.93	1.851	8.11	1.4
SEF IV Mix Feed Bin 1	SEF IV Mix Feed Bin 1 Bin Venting Baghouse	99.0%	0.020	500.0	8.6	37.54	0.086	0.375	0.95
SEF IV Mix Feed Bin 2	SEF IV Mix Feed Bin 2 Bin Venting Baghouse	99.0%	0.020	500.0	8.6	37.54	0.086	0.375	0.95
SEF IV Furnace	SEF IV Furnace Baghouse	99.0%	0.020	20000.0	342.9	1501.71	3.429	15.0	0.95
SEF IV Attrition Mill, Cyclone and Bulk Bagger	SEF IV Downline Baghouse	99.0%	0.020	22000.0	377.1	1651.89	3.771	16.5	0.95
Common Blender Transporter	Common Blender Transporter Venting Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	0.89
No.4 Day Bin H.G. Alumina	No.4 Day Bin H.G. Alumina Bin Venting Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	0.89
No.5 Day Bin Zircon	No.5 Day Bin Zircon Bin Venting Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	0.89

**Appendix A: Emission Calculations
Baghouse Operations**

Company Name: Unifrax Corporation, New Carlisle Facility
Address City IN Zip: 54401 Smilax Road, New Carlisle, IN 46552-9751
Part 70: T 141-7925
Plt ID: 141-00029
Reviewer: CarrieAnn Ortolani
Date: December 18, 1996

Unit ID	Control Name	Control Efficiency (%)	Grain Loading per Dry Standard Cubic foot of Outlet Air (grains/dscf)	Gas or Air Flow Rate (dscfm)	PM Emission Rate before Controls (lb/hr)	PM Emission Rate before Controls (tons/yr)	PM Emission Rate after Controls (lb/hr)	PM Emission Rate after Controls (tons/yr)	Raw Material Throughput (tons/hr)
No.6 Day Bin Test Material	No.6 Day Bin Test Material Bin Venting Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	0.89
Bad Batch Bin	Bad Batch Bin Bin Venting Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	0.89
SEF I, SEF IV Tilt Blender Transporter	SEF I, SEF IV Tilt Blender Transporter Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	0.89
SEF II, SEF III Tilt Blender Transporter	SEF II, SEF III Tilt Blender Transporter Baghouse	99.0%	0.025	500.0	10.7	46.93	0.107	0.469	0.89
Fabrication Area Blow-off Booth	Fabrication Area Blow-off Booth Filter	99.0%	0.025	3000.0	64.3	281.57	0.643	2.82	1.00
Warehouse Blow-off Booth	Warehouse Blow-off Booth Filter	99.0%	0.025	3000.0	64.3	281.57	0.643	2.82	1.00
Totals					3560	15593	35.6	156	

Methodology

Emission Rate in lbs/hr (after controls) = (grains/dscf) x (dscf/min) x (60 min/hr) x (lb/7000 grains)
Emission Rate in lbs/hr (before controls) = Emission Rate (after controls) (lbs/hr) / (1-control efficiency)
Emission Rate in tons/yr = (lbs/hr) x (8760 hr/yr) x (ton/2000 lb)

Appendix A: Emission Calculations
Limited Baghouse Operations

Page 5 of 9 TSD App A

Company Name: Unifrax Corporation, New Carlisle Facility
Address City IN Zip: 54401 Smlax Road, New Carlisle, IN 46552-9751
Part 70: T 141-7925
Plt ID: 141-00029
Reviewer: CarrieAnn Ortolani
Date: December 18, 1996

Unit ID	Control Name	Control Efficiency (%)	Limited Grain Loading per dry standard cubic foot of outlet air (grains/dscf)	Limited Gas or Air Flow Rate (dscfm)	Resulting Limited PM Emission Rate (lb/hr)	Resulting Limited PM Emission Rate (tons/yr)	Max. Raw Material Throughput (tons/yr)	Raw Material Throughput Limit * (tons/yr)	PM Emissions after All Limits (tons/yr)
No.4 Sand Silo	No.4 Sand Silo Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.3 Alumina Silo	No.3 Alumina Silo Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.1 Kaolin Silo	No.1 Kaolin Silo Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.2 Kaolin Silo	No.2 Kaolin Silo Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.5 Zircon Silo	No.5 Zircon Silo Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.6 H.G. Alumina Silo	No.6 H.G. Alumina Silo Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
Alumina Transporter	Alumina Transporter Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.1 Day Bin Kaolin	No.1 Day Bin Kaolin Bin Venting Baghouse	99.0%	0.025	900.0	0.193	0.845	7796	n/a	0.845
No.2 Day Bin Alumina	No.2 Day Bin Alumina Bin Venting Baghouse	99.0%	0.025	900.0	0.193	0.845	7796	n/a	0.845
No.3 Day Bin Sand	No.3 Day Bin Sand Bin Venting Baghouse	99.0%	0.025	900.0	0.193	0.845	7796	n/a	0.845
Tilt Furnace Mix Feed Bins 1 and 2	Tilt Furnace Mix Feed Bins and 2 Baghouse	99.0%	0.025	500.0	0.107	0.469	8147	n/a	0.469
Tilt Furnace Mix Feed Bin 3	Tilt Furnace Mix Feed Bin 3 Baghouse	99.0%	0.025	500.0	0.107	0.469	8147	n/a	0.469
Tilt Furnace	Tilt Fume Collector Baghouse	99.0%	0.003	30000.0	0.643	2.82	8147	n/a	2.82
Tilt Furnace Cyclone, Bulk Bagger, Attrition Mill, Conveyor	Tilt Furnace HSA Baghouse	99.0%	0.003	36000.0	0.771	3.38	8147	n/a	3.38
SEF I Mix Feed Bin	SEF I Mix Feed Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	5957	n/a	0.469
SEF I Furnace	SEF I Furnace Baghouse	99.0%	0.003	15000.0	0.321	1.41	5957	n/a	1.41
SEF I Collector	SEF I Collector Baghouse	99.0%	0.003	24000.0	0.514	2.25	5957	n/a	2.25
SEF I Bulk Bagger, Conveyor System Attrition Mill, Picker	SEF I Downline Baghouse	99.0%	0.005	18000.0	0.833	3.65	5957	n/a	3.65
SEF II Mix Feed Bin 1	SEF II Mix Feed Bin 1 Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	12264	n/a	0.469
SEF II Mix Feed Bin 2	SEF II Mix Feed Bin 2 Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	12264	n/a	0.469
SEF II Furnace	SEF II Furnace Baghouse	99.0%	0.002	20000.0	0.374	1.64	12264	n/a	1.64
SEF II Packaging Equipment and Attrition Mill	SEF II Downline Baghouse	99.0%	0.001	18000.0	0.205	0.899	12264	n/a	0.899
SEF II Cyclone	SEF II Cyclone Baghouse	99.0%	0.001	30000.0	0.285	1.25	12264	n/a	1.25
SEF III Mix Feed Bin 1	SEF III Mix Feed Bin 1 Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	12264	n/a	0.469
SEF III Mix Feed Bin 2	SEF III Mix Feed Bin 2 Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	12264	n/a	0.469
SEF III Slag Reclaim Bin	SEF III Slag Reclaim Bin Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	12264	n/a	0.469
SEF III Furnace	SEF III Furnace Baghouse	99.0%	0.003	20000.0	0.429	1.88	12264	n/a	1.88
SEF III Collector	SEF III Collector Baghouse	99.0%	0.001	39000.0	0.221	0.966	12264	n/a	0.966
SEF III Needler, Wet Slitter, Roll-up Machine, Guillotine, 2.4 MMBtu/hr gas oven, Conveyor System, Attrition Mill, and Bulk Bagger	SEF III Downline Baghouse	99.0%	0.025	18000.0	3.857	16.9	12264	n/a	16.9
ODB Bagger and Opener	ODB Baghouse	99.0%	0.025	6000.0	1.286	5.63	2190	n/a	5.63
Vacuum Cast Mix Tanks 1 and 2	Vacuum Cast Mix Tanks 1 and 2 Baghouse	99.0%	0.025	7500.0	1.607	7.04	8760	4000	3.21

Appendix A: Emission Calculations
Limited Baghouse Operations

Company Name: Unifrax Corporation, New Carlisle Facility
Address City IN Zip: 54401 Smlax Road, New Carlisle, IN 46552-9751
Part 70: T 141-7925
Plt ID: 141-00029
Reviewer: CarrieAnn Ortolani
Date: December 18, 1996

Unit ID	Control Name	Control Efficiency (%)	Limited Grain Loading per dry standard cubic foot of outlet air (grains/dscf)	Limited Gas or Air Flow Rate (dscfm)	Resulting Limited PM Emission Rate (lb/hr)	Resulting Limited PM Emission Rate (tons/yr)	Max. Raw Material Throughput (tons/yr)	Raw Material Throughput Limit * (tons/yr)	PM Emissions after All Limits (tons/yr)
Vacuum Cast Board Sander	Vacuum Cast Board Sander Baghouse	99.0%	0.025	15000.0	3.214	14.1	8760	4000	6.43
Vacuum Cast Board Saw System	Vacuum Cast Board Saw System Baghouse	99.0%	0.025	18000.0	3.857	16.9	8760	4000	7.71
Fabricated Products Area consisting of folding, banding, module-making machines	Fabricated Products Area Fabrication Equipment Baghouse 1	99.0%	0.025	9000.0	1.929	8.45	8760	n/a	8.45
Fabricated Products Area consisting v-blender, ball-mill, high temp caulk fabrication machines	Fabricated Products Area Fabrication Equipment Baghouse 2	99.0%	0.025	5000.0	1.071	4.69	8760	n/a	4.69
Fabricated Products Area Bandsaw System	Fabricated Products Area Bandsaw System Baghouse	99.0%	0.025	2500.0	0.536	2.35	8760	n/a	2.35
Fabrication Area Vacuum System	Fabrication Area Vacuum System Baghouse	99.0%	0.025	1000.0	0.214	0.939	8760	n/a	0.939
Total for those permitted in 1995					24.4	107			86.0
Common Blender Transporter	Common Blender Transporter Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.4 Day Bin H.G. Alumina	No.4 Day Bin H.G. Alumina Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.5 Day Bin Zircon	No.5 Day Bin Zircon Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.6 Day Bin Test Material	No.6 Day Bin Test Material Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
Bad Batch Bin	Bad Batch Bin Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
Fabrication Area Blow-off Booth	Fabrication Area Blow-off Booth Filter	99.0%	0.025	3000.0	0.643	2.82	8760	n/a	2.82
Warehouse Blow-off Booth	Warehouse Blow-off Booth Filter	99.0%	0.025	3000.0	0.643	2.82	8760	n/a	2.82
Totals for facilities that were CWOP/OWOP in 1995, but not permitted in 1995					1.82	7.98			7.98
SEF II Collector	SEF II Collector Baghouse	99.0%	0.030	40000.0	10.286	45.05	12264	n/a	45.1
SEF IV Mix Feed Bin 1	SEF IV Mix Feed Bin 1 Bin Venting Baghouse	99.0%	0.030	500.0	0.129	0.563	8322	n/a	0.563
SEF IV Mix Feed Bin 2	SEF IV Mix Feed Bin 2 Bin Venting Baghouse	99.0%	0.030	500.0	0.129	0.563	8322	n/a	0.563
SEF IV Furnace	SEF IV Furnace Baghouse	99.0%	0.030	20000.0	5.143	22.5	8322	n/a	22.5
SEF IV Attrition Mill, Cyclone and Bulk Bagger	SEF IV Downline Baghouse	99.0%	0.030	22000.0	5.657	24.8	8322	n/a	24.8
SEF I, SEF IV Tilt Blender Transporter	SEF I, SEF IV Tilt Blender Transporter Baghouse	99.0%	0.030	500.0	0.129	0.563	7796	n/a	0.563
SEF II, SEF III Tilt Blender Transporter	SEF II, SEF III Tilt Blender Transporter Baghouse	99.0%	0.030	500.0	0.129	0.563	7796	n/a	0.563
Totals for facilities permitted in 1996 and/or constructed in 1997					21.6	94.6			94.6
Totals					47.8	209			189

Methodology

* Instead of throughput limits, there are limits on the hours of operation at some facilities. This limit in conjunction with the grain loading and flow rate limits ensures that the source does not exceed the limited potential to emit.

Resulting Limited Emission Rate in lbs/hr = (grains/dscf) x (dscf/min) x (60 min/hr) x (lb/7000 grains)

Resulting Limited Emission Rate in tons/yr = (lbs/hr) x (8760 hr/yr) x (ton/2000 lb)

PM Emissions after all limits (tons/yr) = Resulting Limited Emission Rate (tons/yr) x Raw Material Throughput Limit/ Max. Raw Material Throughput

**Appendix A: Emission Calculations
Electric Furnaces**

Company Name: Unifrax Corporation, New Carlisle Facility
Address City IN Zip: 54401 Smilax Road, New Carlisle, IN 46552-9751
Part 70: T 141-7925
Plt ID: 141-00029
Reviewer: CarrieAnn Ortolani
Date: December 18, 1996

Throughput

0.925 ton/hr

Process	Pollutant	Emission Factor	Potential to Emit	
		(lb/ton)	(lb/hr)	(ton/yr)
Tilt Furnace	SOx	0.04	0.037	0.162
	NOx	0.27	0.250	1.09
	CO	0.05	0.046	0.203
	Flourides	0.002	0.002	0.008

Throughput

0.675 ton/hr

Process	Pollutant	Emission Factor	Potential to Emit	
		(lb/ton)	(lb/hr)	(ton/yr)
SEF I	SOx	0.04	0.027	0.118
	NOx	0.27	0.182	0.798
	CO	0.05	0.034	0.148
	Flourides	0.002	0.001	0.006

Throughput

1.4 ton/hr

Process	Pollutant	Emission Factor	Potential to Emit	
		(lb/ton)	(lb/hr)	(ton/yr)
SEF II	SOx	0.04	0.056	0.245
	NOx	0.27	0.378	1.66
	CO	0.05	0.070	0.307
	Flourides	0.002	0.003	0.012

Throughput

1.4 ton/hr

Process	Pollutant	Emission Factor	Potential to Emit	
		(lb/ton)	(lb/hr)	(ton/yr)
SEF III	SOx	0.04	0.056	0.245
	NOx	0.27	0.378	1.66
	CO	0.05	0.070	0.307
	Flourides	0.002	0.003	0.012

Throughput

0.95 ton/hr

Process	Pollutant	Emission Factor	Potential to Emit	
		(lb/ton)	(lb/hr)	(ton/yr)
SEF IV	SOx	0.04	0.038	0.166
	NOx	0.27	0.257	1.12
	CO	0.05	0.048	0.208
	Flourides	0.002	0.002	0.008

Totals	Pollutant		Potential to Emit	
			(lb/hr)	(ton/yr)
	SOx		0.214	0.937
	NOx		1.44	6.33
	CO		0.268	1.17
	Flourides		0.011	0.047

Methodology

Emission factors are from AP-42 Ch 11.13, tables 11.13-4 and 11.13-6.

Potential to emit (lb/hr) = throughput (ton/hr) x emission factor (lb/ton)

Potential to emit (ton/yr) = throughput (ton/hr) x emission factor (lb/ton) x 8760 hr/yr / 2000 lb/ton

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
One (1) Insignificant Boiler**

Page 8 of 9 TSD App A

**Company Name: Unifrax Corporation, New Carlisle Facility
Address City IN Zip: 54401 Smilax Road, New Carlisle, IN 46552-9751
Part 70: T 141-7925
Plt ID: 141-00029
Reviewer: CarrieAnn Ortolani
Date: December 18, 1996**

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

7.00

61.32

Pollutant						
Emission Factor in lb/MMCF	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.058	0.233	0.018	3.07	0.169	2.58

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 9 for HAPs emissions calculations.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
One (1) Insignificant Boiler
HAPs Emissions**

Page 9 of 9 TSD App A

**Company Name: Unifrax Corporation, New Carlisle Facility
Address City IN Zip: 54401 Smilax Road, New Carlisle, IN 46552-9751
Part 70: T 141-7925
Plt ID: 141-00029
Reviewer: CarrieAnn Ortolani
Date: December 18, 1996**

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	6.439E-05	3.679E-05	2.300E-03	5.519E-02	1.042E-04

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	1.533E-05	3.373E-05	4.292E-05	1.165E-05	6.439E-05

Methodology is the same as page 8.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
Limited Baghouse Operations

Page 5 of 9 TSD App A

Company Name: Unifrax Corporation, New Carlisle Facility
Address City IN Zip: 54401 Smlax Road, New Carlisle, IN 46552-9751
Part 70: T 141-7925
Plt ID: 141-00029
Reviewer: CarrieAnn Otolani
Date: December 18, 1996

Unit ID	Control Name	Control Efficiency (%)	Limited Grain Loading per dry standard cubic foot of outlet air (grains/dscf)	Limited Gas or Air Flow Rate (dscfm)	Resulting Limited PM Emission Rate (lb/hr)	Resulting Limited PM Emission Rate (tons/yr)	Max. Raw Material Throughput (tons/yr)	Raw Material Throughput Limit * (tons/yr)	PM Emissions after All Limits (tons/yr)
No.4 Sand Silo	No.4 Sand Silo Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.3 Alumina Silo	No.3 Alumina Silo Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.1 Kaolin Silo	No.1 Kaolin Silo Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.2 Kaolin Silo	No.2 Kaolin Silo Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.5 Zircon Silo	No.5 Zircon Silo Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.6 H.G. Alumina Silo	No.6 H.G. Alumina Silo Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
Alumina Transporter	Alumina Transporter Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.1 Day Bin Kaolin	No.1 Day Bin Kaolin Bin Venting Baghouse	99.0%	0.025	900.0	0.193	0.845	7796	n/a	0.845
No.2 Day Bin Alumina	No.2 Day Bin Alumina Bin Venting Baghouse	99.0%	0.025	900.0	0.193	0.845	7796	n/a	0.845
No.3 Day Bin Sand	No.3 Day Bin Sand Bin Venting Baghouse	99.0%	0.025	900.0	0.193	0.845	7796	n/a	0.845
Tilt Furnace Mix Feed Bins 1 and 2	Tilt Furnace Mix Feed Bins and 2 Baghouse	99.0%	0.025	500.0	0.107	0.469	8147	n/a	0.469
Tilt Furnace Mix Feed Bin 3	Tilt Furnace Mix Feed Bin 3 Baghouse	99.0%	0.025	500.0	0.107	0.469	8147	n/a	0.469
Tilt Furnace	Tilt Fume Collector Baghouse	99.0%	0.003	30000.0	0.643	2.82	8147	n/a	2.82
Tilt Furnace Cyclone, Bulk Bagger, Attrition Mill, Conveyor	Tilt Furnace HSA Baghouse	99.0%	0.003	36000.0	0.771	3.38	8147	n/a	3.38
SEF I Mix Feed Bin	SEF I Mix Feed Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	5957	n/a	0.469
SEF I Furnace	SEF I Furnace Baghouse	99.0%	0.003	15000.0	0.321	1.41	5957	n/a	1.41
SEF I Collector	SEF I Collector Baghouse	99.0%	0.003	24000.0	0.514	2.25	5957	n/a	2.25
SEF I Bulk Bagger, Conveyor System Attrition Mill, Picker	SEF I Downline Baghouse	99.0%	0.005	18000.0	0.833	3.65	5957	n/a	3.65
SEF II Mix Feed Bin 1	SEF II Mix Feed Bin 1 Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	12264	n/a	0.469
SEF II Mix Feed Bin 2	SEF II Mix Feed Bin 2 Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	12264	n/a	0.469
SEF II Furnace	SEF II Furnace Baghouse	99.0%	0.002	20000.0	0.374	1.64	12264	n/a	1.64
SEF II Packaging Equipment and Attrition Mill	SEF II Downline Baghouse	99.0%	0.001	18000.0	0.205	0.899	12264	n/a	0.899
SEF II Cyclone	SEF II Cyclone Baghouse	99.0%	0.001	30000.0	0.285	1.25	12264	n/a	1.25
SEF III Mix Feed Bin 1	SEF III Mix Feed Bin 1 Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	12264	n/a	0.469
SEF III Mix Feed Bin 2	SEF III Mix Feed Bin 2 Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	12264	n/a	0.469
SEF III Slag Reclaim Bin	SEF III Slag Reclaim Bin Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	12264	n/a	0.469
SEF III Furnace	SEF III Furnace Baghouse	99.0%	0.003	20000.0	0.429	1.88	12264	n/a	1.88
SEF III Collector	SEF III Collector Baghouse	99.0%	0.001	39000.0	0.221	0.966	12264	n/a	0.966
SEF III Needler, Wet Slitter, Roll-up Machine, Guillotine, 2.4 MMBtu/hr gas oven, Conveyor System, Attrition Mill, and Bulk Bagger	SEF III Downline Baghouse	99.0%	0.025	18000.0	3.857	16.9	12264	n/a	16.9
ODB Bagger and Opener	ODB Baghouse	99.0%	0.025	6000.0	1.286	5.63	2190	n/a	5.63
Vacuum Cast Mix Tanks 1 and 2	Vacuum Cast Mix Tanks 1 and 2 Baghouse	99.0%	0.025	7500.0	1.607	7.04	8760	4000	3.21

Appendix A: Emission Calculations
Limited Baghouse Operations

Company Name: Unifrax Corporation, New Carlisle Facility
Address City IN Zip: 54401 Smlax Road, New Carlisle, IN 46552-9751
Part 70: T 141-7925
Plt ID: 141-00029
Reviewer: CarrieAnn Ortolani
Date: December 18, 1996

Unit ID	Control Name	Control Efficiency (%)	Limited Grain Loading per dry standard cubic foot of outlet air (grains/dscf)	Limited Gas or Air Flow Rate (dscfm)	Resulting Limited PM Emission Rate (lb/hr)	Resulting Limited PM Emission Rate (tons/yr)	Max. Raw Material Throughput (tons/yr)	Raw Material Throughput Limit * (tons/yr)	PM Emissions after All Limits (tons/yr)
Vacuum Cast Board Sander	Vacuum Cast Board Sander Baghouse	99.0%	0.025	15000.0	3.214	14.1	8760	4000	6.43
Vacuum Cast Board Saw System	Vacuum Cast Board Saw System Baghouse	99.0%	0.025	18000.0	3.857	16.9	8760	4000	7.71
Fabricated Products Area consisting of folding, banding, module-making machines	Fabricated Products Area Fabrication Equipment Baghouse 1	99.0%	0.025	9000.0	1.929	8.45	8760	n/a	8.45
Fabricated Products Area consisting v-blender, ball-mill, high temp caulk fabrication machines	Fabricated Products Area Fabrication Equipment Baghouse 2	99.0%	0.025	5000.0	1.071	4.69	8760	n/a	4.69
Fabricated Products Area Bandsaw System	Fabricated Products Area Bandsaw System Baghouse	99.0%	0.025	2500.0	0.536	2.35	8760	n/a	2.35
Fabrication Area Vacuum System	Fabrication Area Vacuum System Baghouse	99.0%	0.025	1000.0	0.214	0.939	8760	n/a	0.939
Total for those permitted in 1995					24.4	107			86.0
Common Blender Transporter	Common Blender Transporter Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.4 Day Bin H.G. Alumina	No.4 Day Bin H.G. Alumina Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.5 Day Bin Zircon	No.5 Day Bin Zircon Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
No.6 Day Bin Test Material	No.6 Day Bin Test Material Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
Bad Batch Bin	Bad Batch Bin Bin Venting Baghouse	99.0%	0.025	500.0	0.107	0.469	7796	n/a	0.469
Fabrication Area Blow-off Booth	Fabrication Area Blow-off Booth Filter	99.0%	0.025	3000.0	0.643	2.82	8760	n/a	2.82
Warehouse Blow-off Booth	Warehouse Blow-off Booth Filter	99.0%	0.025	3000.0	0.643	2.82	8760	n/a	2.82
Totals for facilities that were CWOP/OWOP in 1995, but not permitted in 1995					1.82	7.98			7.98
SEF II Collector	SEF II Collector Baghouse	99.0%	0.030	40000.0	10.286	45.05	12264	n/a	45.1
SEF IV Mix Feed Bin 1	SEF IV Mix Feed Bin 1 Bin Venting Baghouse	99.0%	0.030	500.0	0.129	0.563	8322	n/a	0.563
SEF IV Mix Feed Bin 2	SEF IV Mix Feed Bin 2 Bin Venting Baghouse	99.0%	0.030	500.0	0.129	0.563	8322	n/a	0.563
SEF IV Furnace	SEF IV Furnace Baghouse	99.0%	0.030	20000.0	5.143	22.5	8322	n/a	22.5
SEF IV Attrition Mill, Cyclone and Bulk Bagger	SEF IV Downline Baghouse	99.0%	0.030	22000.0	5.657	24.8	8322	n/a	24.8
SEF I, SEF IV Tilt Blender Transporter	SEF I, SEF IV Tilt Blender Transporter Baghouse	99.0%	0.030	500.0	0.129	0.563	7796	n/a	0.563
SEF II, SEF III Tilt Blender Transporter	SEF II, SEF III Tilt Blender Transporter Baghouse	99.0%	0.030	500.0	0.129	0.563	7796	n/a	0.563
Totals for facilities permitted in 1996 and/or constructed in 1997					21.6	94.6			94.6
Totals					47.8	209			189

Methodology

* Instead of throughput limits, there are limits on the hours of operation at some facilities. This limit in conjunction with the grain loading and flow rate limits ensures that the source does not exceed the limited potential to emit.

Resulting Limited Emission Rate in lbs/hr = (grains/dscf) x (dscf/min) x (60 min/hr) x (lb/7000 grains)

Resulting Limited Emission Rate in tons/yr = (lbs/hr) x (8760 hr/yr) x (ton/2000 lb)

PM Emissions after all limits (tons/yr) = Resulting Limited Emission Rate (tons/yr) x Raw Material Throughput Limit/ Max. Raw Material Throughput